

LB

3218

I3A5

1919



STANDARD
ELEMENTARY SCHOOLS

ILLINOIS
1920



CIRCULAR 144
Seventh Edition

COLOR FOR WALLS AND CEILING.

The color of the cover is a good tint for the walls.

The color of this sheet is a good tint for the ceiling.

Standard
Elementary School

ILLINOIS

1920

Section I Sanitary Schoolrooms.

II Standard Schools

III Schoolhouses

IV Consolidated Schools

V High School Privileges

F. G. BLAIR,
Superintendent of Public Instruction

U. J. Hoffman, W. S. Booth, Assistants
Supervisors of Elementary Schools

CIRCULAR NO. 144 SEVENTH EDITION

1 3 3
2 3 3
3 3 3
3 3 3

LB3218
.I3A5
1919



SCHNEPP & BARNES, PRINTERS
SPRINGFIELD, ILL.
1919.

30004-30M

n. of v.

MAY 3 1920



TMP 92-008310

CONTENTS AND INDEX.

	PAGE
A word to school officers.....	5
Sanitary school rooms.....	7
The law governing sanitation.....	7
Duties of school officers.....	7-8
Heating and ventilation.....	8
Room heaters	8
Requirements and suggestions.....	9-14
Basement furnaces	14
Requirements and suggestions.....	14-18
Steam heating	18
Requirements and suggestions.....	18-20
Lighting	20
Requirements and suggestions.....	20-21
Seating	21
Requirements and suggestions.....	21-26
Water supply	26
Requirements and suggestions.....	26-28
Toilets	28
Requirements and suggestions.....	28-33
Safety against fire.....	34
Inspection record	35-38
Standard schools	39
One-room, standard	41
One-room, superior	45-59
Graded, standard and superior.....	59-67
School houses	67
One room plans.....	67-81
Graded school plans.....	82-91
Consolidated schools	92
The law for consolidation.....	92
Information about consolidated schools.....	96
High school privileges.....	113



THE STATE CAPITOL

Diploma

Awarded to

*School District No. 133
in the County of De Kalb*

By the Department of Public Instruction
of the State of Illinois

*For the satisfactory condition of the School Fund,
Fees, Water Supply, Fuel Houses, School Building,
Heating, Ventilation, Furnishings, Organization
and Teaching as determined by an inspection made
by this Department and recorded in the office of the
County Superintendent of Schools.*

*This Diploma will be renewed annually upon the
statement of the County Superintendent that the above
conditions remain satisfactory.*

Dated November 30, 1909.



John A. Hoffman

Chief Clerk, Department

Renewed for the year

Renewed for the year

Renewed for the year

Renewed for the year

J. G. [Signature]

STATE DEPARTMENT OF PUBLIC INSTRUCTION

No. 1

TO SCHOOL OFFICERS.

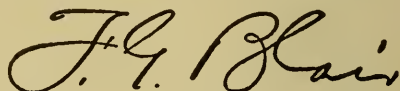
The march from the old log schoolhouse of the pioneers to the standard or superior schoolhouse of today has followed a long and hard road beset at times with almost impossible obstacles. But for the last ten years the road has been easier to travel and much progress has been made. So long as people lived in log houses and kept their stock in log barns and pens, the log schoolhouse was a matter of course. But many years after the log residences had been replaced by frame and brick, the log school remained. Even after the cattle and horses and sheep and pigs had been provided a comfortable, roomy, airy barn, the old log schoolhouse was counted good enough for the children. No doubt the common belief that education consisted mainly in subjecting children to hardships, to serious disciplines and deprivations, had something to do with the long life of those barren, uninteresting houses. Today we often hear an echo of that old voice telling us that we are making education too easy, too soft for the children; that our school buildings are too fine and furnishings too rich and plentiful; that we are making the children dependent rather than resourceful, expecting always to be helped rather than to help themselves. But such an argument, if it has any force, would hold equally against better homes, better food, better clothing and better machinery. It is doubtful whether a truer indication of the civilization and culture of a community can be found than the kind of a school building which it provides for its children. But in many of our best districts it has required hard and persistent effort to arouse and maintain that sentiment and pride which are necessary to get and keep a schoolhouse which is in keeping with the homes, churches and public buildings of those communities. In the main, however, all that the people have needed was suggestion and information.

The improvement in school buildings in Illinois from 1908 down to the outbreak of the World War is one of the outstanding events since the organization of the public school system, although much remains to be done. Aside from the conditions of prosperity and progress which have exercised helpful influences, the two main factors in this building and repairing program are the standardization plan and the sanitation law. Had it not been for the war and the consequent increase in the price of building materials and labor, our million boys and girls would all be

housed in comfortable, sanitary schoolrooms today. Some forward looking communities have been held in impatient restraint by these war conditions and have already launched their building campaign. Unfortunately, some districts gladly welcomed anything that would delay the doing of what they did not want to do.

We are now ready for a forward movement all along the line. The county and city superintendents must lead. Every spot on the map where good schools have displaced unfit ones marks the location of some vigorous, courageous superintendent. Mr. Hoffman and Mr. Booth, who have done so much in shaping and directing this movement, can accomplish very little unless there is aggressive local leadership.

This circular supplies detailed suggestions and information.

A handwritten signature in cursive script, reading "J. G. Blair". The letters are fluid and connected, with a prominent "J" and "B".

Superintendent of Public Instruction.

SECTION 1. SANITARY SCHOOL ROOMS.

SPECIFICATIONS OF MINIMUM REQUIREMENTS MADE BY THE SUPERINTENDENT OF PUBLIC INSTRUCTION, 1920, SUPERSEDING THOSE PREVIOUSLY MADE.

The State requires under penalty, that every child of school age shall attend school every day that schools are in session. To require such attendance in school rooms which endanger their health and safety, would be a great injustice to the children of the state. To avoid such injustice as well as to make school attendance of greatest benefit to the children, the Legislature of 1915 amended the School law providing that every school room must be constructed, furnished and conditioned to conserve the health and safety of its occupants.

The things which are closely related to the child's physical well-being as well as school life are:

- Heating
- Ventilation
- Lighting
- Seating
- Water supply
- Toilets
- Safety against fire

The statute does not state in detail how these conditions shall be met. Specific directions are left to the State Superintendent of Public Instruction. These specifications have the force of law.

The enforcement of the law devolves upon the Superintendent of Public Instruction, the county superintendent of schools, the board of township trustees and the boards of directors and boards of education.

THE LAW GOVERNING THE SANITATION OF SCHOOLROOMS.

DUTY OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION.

The duty of the Superintendent of Public Instruction shall be to prepare, with the advice of the State Board of Health, the State Architect and the State Fire Marshal, for school directors and boards of education specifications for the minimum requirements for heating, ventilation, lighting, seating, water supply, toilets and safety against fire which will conserve the health and safety of the children attending the public schools. Section 3, paragraph 13.

DUTY OF THE COUNTY SUPERINTENDENT OF SCHOOLS.

Approved Plans.—The duty of the county superintendent of schools shall be to inspect the plans and specifications for heating, ventilation, lighting, seating, water supply, toilets and safety against fire for public schoolrooms and buildings submitted to him by boards of education or boards of directors, and to approve all those which comply substantially with the specifications prepared and published by the Superintendent of Public Instruction. Section 15, paragraph 20.

Inspect Buildings.—To inspect all public schools under his supervision and notify in writing before the first day of April the board of school trustees or other boards exercising similar functions whether the several schools in their jurisdiction have or have not been kept as required by law. Section 15, paragraph 21.

Condemn Buildings.—To request the State Board of Health, (Department of Health,) the State Fire Marshal, or the State Architect to inspect public school buildings which appear to him to be unsafe, insanitary or unfit for occupancy. It shall be the duty of these officials to inspect such buildings and to state in writing in what particular they are unsafe, insanitary or unfit for occupancy. Upon the receipt of such statement the county superintendent of schools shall condemn the building and notify in writing the board of directors or board of education, stating specifically the reasons for such condemnation. He shall also notify in writing the board of school trustees that the school so condemned is not kept as required by law. Section 15, paragraph 22.

Note.—The purpose of this provision of the law is to reinforce the position taken by the county superintendent of schools by the opinion of experts when he desires such reinforcement.

Only in exceptional cases, does the county superintendent need to call for assistance from more than one of the officials mentioned. In case of insanitary conditions call upon the State Department of Health: in case of dangerous condition due to structural defects, call upon the State Architect: in case of danger from non-compliance with the law relative to fire hazard, call upon the State Fire Marshal.

DUTY OF THE TOWNSHIP TRUSTEES.

Withhold Funds.—When the board of trustees has had notice from the county superintendent of schools that a district has not kept school as required by law, the part of the distributive fund apportioned to such district shall be withheld until the county superintendent has given notice in writing that the requirements of the law have been complied with. The amount withheld shall then be placed to the credit of such district: *Provided*, in cases where the schoolhouses were already in use for school purposes July 1, 1915, and do not comply with the minimum requirements for the health and safety of the pupils as set forth by the Superintendent of Public Instruction, the distributive fund shall not be withheld until after March 1, 1917. Section 35, School Law.

DUTY OF BOARDS OF DIRECTORS AND BOARDS OF EDUCATION.

Submit Plans.—Before erecting or remodeling a public school building the board of directors or the board of education in districts containing fewer than one hundred thousand inhabitants shall submit the plans and specifications respecting heating, ventilation, lighting, seating, water supply, toilets and safety against fire to the county superintendent of schools for his approval. Section 119, School Law.

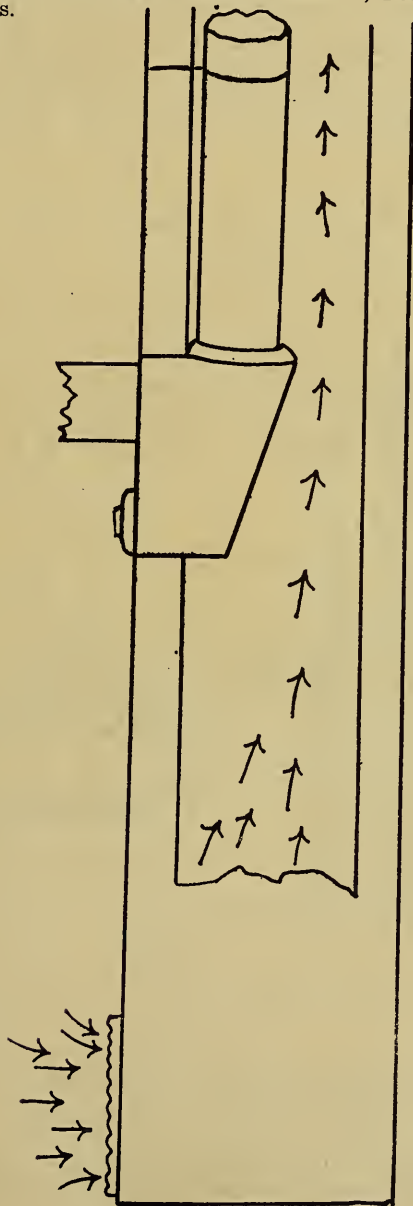
HEATING AND VENTILATION.

I. ROOM HEATERS.

A room heater is a form of warm air furnace which is placed in a corner of the room. To be used in a school room it must be so installed as to bring in air from out of doors, conduct it through the furnace and deliver it in the room. Provision must also be made to withdraw air from the floor level in quantity equal to that admitted to the furnace. The use of a bare stove or jacketed stove which does not provide for the admission of air from the outside and a withdrawal of air from within the room is prohibited.

SPECIFICATIONS.

No. 1. The stove within the casing or jacket shall be of suitable size to heat the room in all parts during the coldest weather to a temperature of 70 degrees F. without too hot a fire. Counting all the space to be heated school room, classrooms, and library room, for 8,000 to 10,000 cubic feet, the grate area should be 18 inches in diameter; From 10,000 to 12,000 cubic feet 22 inches in diameter; From 12,000 to 17,000 cubic feet, 24 inches.



Single Flue Ventilation.

No. 2. The casing which surrounds the stove shall be at least as high as the stove. The distance between the stove and casing at the narrowest place not less than eight inches.

If the casing extends to the floor the duct admitting the air to furnace shall be so constructed that when the outside opening is open the inside opening shall be closed and when the outside opening is closed the inside opening shall be open.

If the casing does not extend to the floor the duct from the outside shall be so constructed that the entering cold air cannot fall to the floor, but is directed upward between the casing and the stove.

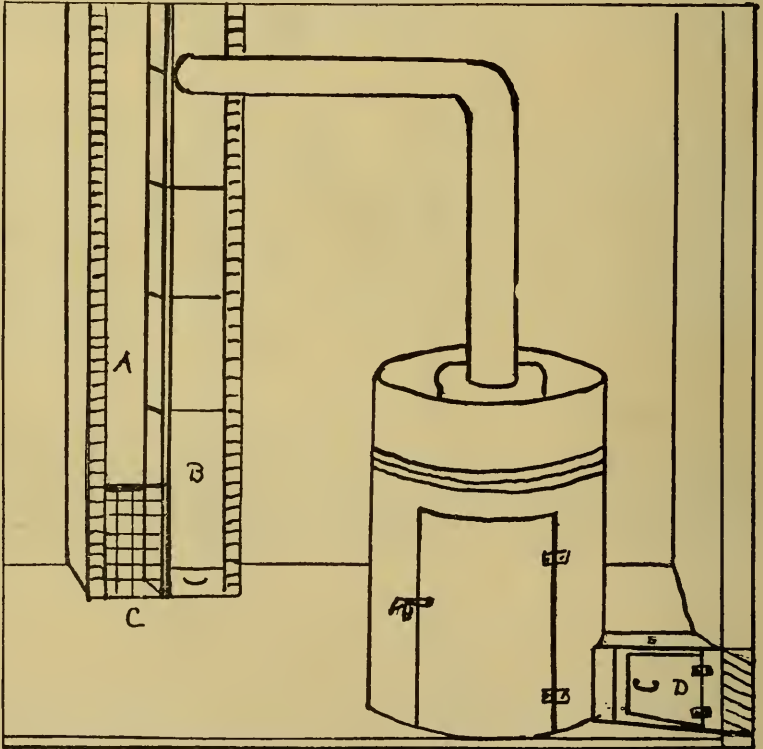
No. 3. The damper which controls the admission of air from the outside shall be closefitting and the opening from the outside shall be protected, so that the wind and rain cannot blow directly into it.

FRESH AIR DUCTS AND VENTILATING FLUES.

SINGLE FLUE VENTILATING CHIMNEY.

For a room 8,000 cubic feet or under:

a. Cross-sectional area of flue, not less than 256 square inches, 16 by 16 inches.



CONSTRUCTION OF A DOUBLE FLUE CHIMNEY.

(a) Foul air flue. (b) Chimney tile. (c) Opening into foul air flue.
(d) Door which controls supply of air to the furnace.

b. Cross-sectional area of foul air register at the floor level, not less than 192 square inches equal to 12 by 16 inches the small dimension upward.

c. Cross-sectional area of fresh air intake in the wall by the heater, not less than 180 square inches, equal to 12 by 15 inches.

d. Outside size of chimney 20 by 24 inches, 8 inch brick, $2\frac{1}{2}$ wide by 3 bricks long, and at least 26 feet high. The long way of the chimney must face the schoolroom.

For a room more than 8,000 cubic feet:

a. Cross-sectional area of flue, not less than 256 square inches, 16 by 16 inches.

b. Cross-sectional area of foul air register at floor level not less than 256 inches, 16 by 16 inches.

c. Cross-sectional area of fresh air intake in the wall near the heater, not less than 240 square inches, equal to 15 by 16 inches.

d. Outside size of chimney, 24 by 24 inches, 8-inch brick, 3 bricks by 3 bricks and at least 30 feet high.

DOUBLE FLUE VENTILATING CHIMNEY.

For a room 8,000 cubic feet or under:

a. Cross-sectional area of smoke flue not less than 96 square inches, 8 by 12 inches.

b. Cross-sectional area of ventilating flue, not less than 192 square inches, 12 by 16 inches.

c. Cross-sectional area of register at the floor level, not less than 192 square inches, equal to 12 by 16 inches.

d. Cross-sectional area of fresh air intake in the wall near the heater, not less than 180 square inches, equal to 12 by 15 inches.

e. Outside size of chimney 20 inches wide by 32 inches long, 8-inch brick, $2\frac{1}{2}$ wide, 4 long, at least 26 feet high. The long way of the chimney must face the school-room.

For a room more than 8,000 cubic feet:

a. Cross-sectional area of smoke flue not less than 96 square inches, 8 by 12 inches.

b. Cross-sectional area of ventilating flue, not less than 240 square inches, 12 by 20 inches.

c. Cross-sectional area of register at the floor level, not less than 240 square inches, 12 by 20 inches.

d. Cross-sectional area of fresh air intake in the wall near the heater, not less than 240 inches, equal to 15 by 16 inches.

e. Outside size of chimney, 20 by 36 inches, 8-inch brick, $2\frac{1}{2}$ bricks wide, $4\frac{1}{2}$ bricks long, at least 30 feet high. If the chimney can be higher it will give better service in unusual weather.

Every fresh air duct and foul air vent should be provided with shutoffs so that they can be kept closed at night and to give control of the entering or outgoing air in unusual weather.

The grills and dampers should not take up more than one-third of the space of the openings.

The chimney should always be at least 4 feet higher than any nearby object, such as a gable or a tower.

No. 4. *Foul Air Vent.*—The cross-sectional area of the opening into the foul air vent shall not be less than the cross-sectional area of the fresh air opening in the wall.

No. 5. *Size of Room.*—All classrooms shall have at least 16 square feet of floor space and not less than 200 cubic feet of air space per pupil.

SUGGESTIONS.

HEATERS AND VENTILATORS ON THE MARKET.

There are many room heaters on the market. Some no doubt are better than others.

The difference among the several kinds of room heaters is not so much a matter of construction as it is of durability of materials. Whether they do the work satisfactorily is dependent upon their proper installation.

Directors should use their best judgment in the selection. They should, however, make sure that the stove is large enough to heat the room, that it is made of durable material, that doors and draft openings are capable of being closed so well that fire can be kept over night. They should also require that the law is complied with regarding ample provisions for ventilation, both in the intake and outlet of air.

Sheet iron ventilating shafts through the roof should not be purchased. They will not last nor do they render satisfactory service. The same is true of sheet iron ventilating pipes from the floor into the chimney. When heaters are installed, only chimney ventilation should be accepted. When the heaters now in use which were installed with sheet iron pipes are worn out, a chimney should be built which provides for ventilation.

LOCATION OF THE HEATER.

Wherever possible the heater should be located in the end of the room in which is the entrance. The cold air coming in when the door is opened will then be taken up by the heater. If it is at the end opposite the entrance the entering cold air will flow over the feet of the children on its way to the heater. It is better to have the children face away from the door and the teacher face the door. The heater is much in the way when in the end of the room in front of the children.

IMPORTANCE OF CHIMNEYS.

The chimney is a very important matter.

A single flue chimney if of the proper size and height in proportion to size is satisfactory. The evil to provide against is the falling of soot to the bottom of the ventilating shaft. A device such as illustrated on page 9 will do the work.

A single flue chimney, with a smoke pipe through it, as shown on page 9, is the most satisfactory.

A double flue chimney, the smoke flue of which is made of fire clay chimney lining as shown on page 10 will work satisfactorily.

APPROVAL OF HEATERS.

The county superintendent is authorized to approve heaters and their installation in schoolhouses. It is also within his power to refuse to approve a schoolhouse using a heater which does not meet the requirements. Both dealers and boards of directors should secure his approval before installing a heater. When heaters are worn out they should not be replaced by stoves.

IMPORTANCE OF TIGHT FLOORS AND CEILINGS.

It must be borne in mind that no room heater and ventilator can do satisfactory work if the floor is not tight and when the foundation is so open that it is as cold under the house as it is outside. Every school-house should have a tight foundation with no holes except for the ventilation of the space under the house. These should be closed up in winter.

A room heater warms the floor by heating all the air in the room. As the cold air remains on the floor while the warm air rises to the top, if the cold air comes in so fast that it cannot move to the stove fast enough to be heated, a layer of cold air remains on the floor while at the ceiling it may register 100 degrees.

The ceiling also must be tight or the warm air will escape into the attic.

Board ceilings may be made tight by fitting building paper between the rafters in the attic, and tacking it down so that it will fit snug and not be moved by air pressure.

Before installing a heater, see to it that the foundation, floor, windows and ceiling are tight.

INSIST UPON A GUARANTEE.

When buying a heater, insist upon a contract and guarantee that the heater will heat and ventilate the room in a satisfactory manner. If the salesman undertakes to give you satisfactory results when the condition of the chimney, floor and ceiling are such as to make satisfaction impossible, let the loss be his rather than that of the district.

WHY VENTILATION IS NEEDED.

The body needs clean, wholesome air as much as it does clean and wholesome food. We breathe the air for two purposes. First, to get the oxygen needed by the body. Second, to remove the worn out parts of the body. Every breath of air coming from the body is unclean. It contains water and organic matter which has come out of the system in the form of vapor. It contains too much carbonic acid gas and may contain disease germs. If this air is breathed again, there is not enough oxygen in it to be good for the body and it contains the impurities from the previous breathing. When the air has been breathed a second time, it becomes dangerous to health. Thirty children in an ordinary schoolroom breathe all the air in a half hour. In an hour and a half the same air has passed through the lungs of the children three times. Is not this about the most unclean practice of people who mean to be clean? It is most revolting, yet this is not the worst. The injury to the children's health is what should concern us most. Colds, catarrh, headaches, nervousness, languor, listlessness, aversion to activity, lack of ruggedness are often due to bad ventilation. Children in this condition of body and mind cannot make the progress in school work which we expect of them.

DANGER FROM COUGHING AND SNEEZING.

There is great danger of spreading disease germs by coughing or sneezing into the open. This is especially true of the germs which cause colds, influenza, diphtheria, scarlet fever, and tuberculosis. Pupils should be trained to cough or sneeze into a handkerchief held close to the nose or mouth. Good ventilation will lessen the spread of these diseases if this practice is observed.

THE BEST WAY TO VENTILATE.

The best way to ventilate in cold weather is to bring the outside air in through the heater, and to remove the foul air from the floor. If clean air from the outside is brought through the heater, it is warmed and rises to the top of the room. The foul air in the room being colder sinks to the floor and the ventilating flue removes it from the room. Thus a current of clean air is running in and a current of foul air is running out, the children breathing health-giving instead of disease-producing air. The heaters and ventilators do the work if they are properly placed in school houses properly built. They will not do the work in the houses which are full of openings and no more fitted to keep out cold than a tent.

WINDOW VENTILATION NEEDED.

Even when room heaters and basement furnaces supplying air from the outside are used, window ventilation is needed much of the time.

Always at intermissions the windows should be opened and the air flushed out. Five minutes is sufficient time.

When the outside temperature registers between 50 and 70 degrees a little fire is needed, but it is difficult to keep the room at the right temperature. It gets too warm and the air is unfit to breathe. Under these conditions the ventilating apparatus removes only a small amount of air. Windows should then be opened. Only in very cold weather should the ventilating apparatus alone be depended on.

HOW TO OPEN WINDOWS.

Three or four windows should be lowered from the top, one inch in coldest weather. The blowing of the wind must be taken into consideration. Thus lowering the windows leaves also an opening of equal size where the lower and upper sash meet. Through these narrow openings a thin layer of air is admitted. This readily mixes with the warm air in the room and when it comes down to the children it is no longer cold. If the windows are opened below the cold air blows directly on the children, falls to the floor and makes the children sit in cold air a foot or more deep.

If the windows are opened too wide at the top the cold air falls down on the children without mixing with the warm air in the room.

II. BASEMENT FURNACES.

The room heater has proved very satisfactory in one room school buildings which have no basement. It is much better than a furnace under the house with an excavation large enough only for the furnace. It requires less fuel, is more easily fired and cared for, there is less danger of over heating for it is in sight. It costs less.

A basement as large as the floor area of the room is a great addition to a one-room schoolhouse and is a fine play room for the children in bad weather, besides many activities are possible which can be had only at great inconvenience in a house without this room.

As much care should be used in the construction of the basement as in the school room. The floor should be concrete and drainage provided so that the floor can be easily washed. The water supply should be in the basement. The walls and door of the coal room should be so tight that dust cannot escape into the school room or basement room. The room should be ceiled.

In such a house a basement furnace is very satisfactory if properly installed and cared for. A good janitor is an essential. The care of the furnace is too heavy work for a woman teacher.

SPECIFICATIONS OF REQUIREMENTS FOR BASEMENT FURNACES.

No. 6. *Ventilation*.—If a basement furnace is used, provision shall be made to bring in outside air through the furnace and for removing foul air from the room through a foul air duct. The duct supplying the air to the furnace shall have a cross-sectional area at its narrowest place of at least 400 square inches. For a larger furnace, it shall be more. The cross sectional area of the foul air vent shall not be less than the cross sectional area of the fresh air opening. The door closing the outside air opening shall be so placed that when open it prevents the air from outside blowing into the room. All chains or rods controlling the furnace or the ventilation shall be operated from the school room.

No. 7. *Entrances*.—to the basement shall be from inside the room and from outside.

No. 8. The floor of the basement shall be concrete.

No. 9. *The warm air duct* from the furnace to the school room shall extend at least six feet above the floor and the cross-sectional area shall be at least 400 square inches at the narrowest point. The opening of the foul air flue shall be at the floor level and so constructed as to be heated by the smoke flue to cause an upward current.

No. 10. *The cold air duct* to the furnace shall be composed of two compartments, one to convey air from the outside, and from the inside of the room when desired. The other compartments shall convey air from the room only and shall be open at all times. The combined cross-sectional area of these ducts shall be not less than 400 square inches and the duct conveying the outside air shall be not less than 180 square inches. The cold air duct shall receive the air at the floor level.

The duct for the outside air shall have an opening from the outside at least 10 by 18 inches. This shall be provided with a door hung at the top of the opening and swing inward so that it closes the opening from the room into this duct. But when the door is closed the air from the room may pass down this duct.

The return air duct shall be protected by a wire mesh and above this may be a covering which will serve as a stand or table.

No. 11. *A foot warmer* shall be placed at the floor level. This should be placed in the warm air duct, closed with a door hung at the top of the opening and swung inward. When the lower opening is closed by this door all the warm air comes out at the upper opening. When the door is opened, it closes the duct and causes the warm air to come out of the lower opening.

SUGGESTIONS FOR BASEMENT FURNACES.

Furnaces which have been installed without a fresh air intake and a foul air outlet should be reinstalled in compliance with requirements 9, 10, 11. The county superintendent should be consulted before changes are made as provided by law. Sections 14-19.

A GOOD WAY TO INSTALL A FURNACE.

The following illustrations and the illustrations of the furnace in the one-room building on page 73 will give a clear idea of how to install a furnace which will meet the requirements in Nos. 9, 10, 11. The most essential requisite is an ample supply of air to the furnace to be warmed and ample facility for the warmed air to rise into the room. To secure these results both ducts must be large enough and as nearly perpendicular as they may be made. The cold air to the furnace should go straight downward and the warm air straight upward. Long horizontal ducts should be avoided. The air should come in and go out at the same wall. This insures a complete circuit of air for the warm air rises to the top of the room and moves to the opposite side. The cold air moves from the opposite side back to the wall where the ventilating shaft is situated.

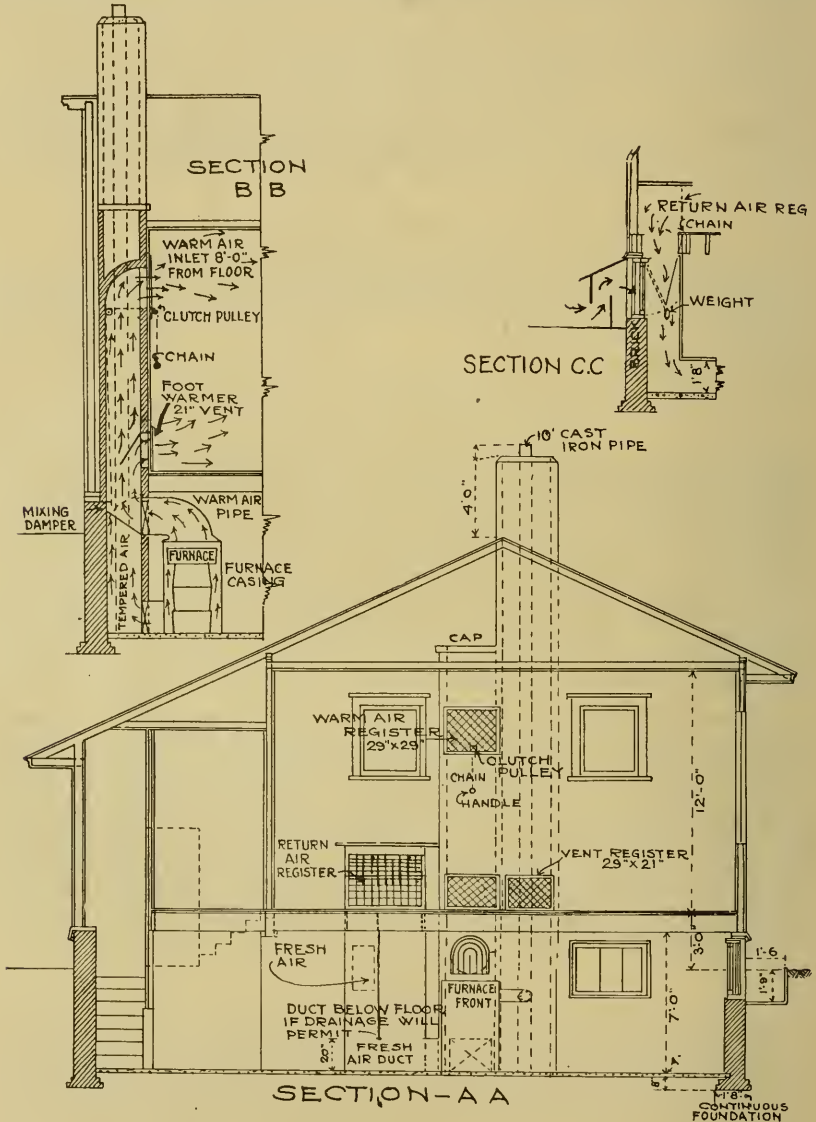
Two rooms can be well heated with one large furnace. But care must be taken to make the ducts large enough and the ventilating duct in the chimney should carry away as much air as the ducts from the outside can bring in. Whenever two rooms are heated with one furnace a damper should be placed in each warm air shaft so that the flow of air can be checked in one and forced into the other. When there are north and south, east and west rooms the heat is with difficulty forced into the room in the direction from which the wind blows and it more readily flows into the opposite room. If the flow into the room away from the windy side be checked the warm air will flow into the other in larger quantity. To heat larger buildings a fan should be installed to force the air through the furnaces into the rooms.

SECTION BB.

The furnace is located two or three feet from the wall at the end of the basement. One short 23-inch pipe conducts the heated air into the warm air duct, which is 21 by 29 inches and enters the room 6 or 7 feet above the floor. This warm air duct extends to the basement floor. Here there is a 12 by 18 short pipe connecting with the base of the furnace casing. In the warm air duct at the entrance of the warm air pipe is a damper. When this is let down all the air entering the room passes over the stove in the furnace casing. When it is raised, cooler air rises from below and is mixed with the warmer air from the top of the furnace. Care should be taken to make it impossible to draw the damper clear up and closing the opening from the top of the furnace, as this would cause the stove to be overheated.

FIGURE C. C. RETURN AIR.

This is a side view of the return air duct. This is composed of two compartments—one for the outside air and the other for the return air from the room. A front view of this is shown in Fig. A. A. The door for



the outside opening is hung at the top and swings inward. The outside air compartment is open at the top. When the door is closed, the air from the room goes down this compartment as well as down the return air compartment. But when the door is open to admit the outside air it is drawn up and closes the opening from the room. The door should fit snug at both

openings. This will prevent cold air blowing up into the room. At night and when it is desired to warm the room quickly the door should be closed and if it fits closely no outside air can get in. Then only the air from the room is circulated through the furnace.

Above the opening in the floor there should be erected a stand and on two sides about the legs of the stand there should be wire mesh to prevent dirt from falling into the opening.

The opening from the outside should be protected from the rain and the direct wind, as shown in the figure.

The return air duct should be made of matched lumber, as should the door, but the duct from this to the casing of the furnace should be of galvanized iron covered with boards.

FIGURE A. A.

This is a view facing the end of the room where the furnace is installed. Here is shown the vent register at the opening into the ventilating chimney. If a double flue chimney is used the smoke compartment should be at the right so that the ventilating compartment will be warmed from both sides. The warm air register is shown; also below this the foot warmer. In Fig. B. B. the damper controlling the foot warmer is shown. The return air register is shown, as is the stand above it. Below this is the two compartment return air duct and the opening for the admission of outside air. The opening through the floor for the return air duct shall be 18 by 30 inches.

SUPPLY OF AIR TO THE FURNACE.

The warm air furnace is dependent on the fact that warm air is lighter than cold air. When air is warmed it rises and the colder air descends. The room is warmed by filling it with warm air from the furnace. But warm air will not go into the room unless the air already in the room moves out. The ventilating flue, if warmed, causes the air in the room to move out. The return air duct to the furnace also carries the cold air out of the room but back to the furnace. As soon as the cold air in the room has been replaced by warm air the room is warm.

If the air does not go to the furnace fast enough, it becomes overheated, but does not move into the room fast enough to fill it down to the floor. Then the upper part of the room is very warm but the floor and where the children sit is cold. Hence, the air ducts to the furnace should be large enough to supply plenty of air.

WARM AIR DUCT TO THE ROOM.

If the warm air from the furnace does not flow away fast enough it becomes overheated but does not fill the room fast enough to displace the cold air on the floor. Hence, the air duct from the furnace to the room should be large enough to carry the air away rapidly and in large quantity.

The success of the furnace depends almost wholly on the capacity of the air ducts to carry a large quantity of air to and from the furnace. Long pipes with turns in them prevent the rapid flow of air and should be avoided.

The method of installing here recommended avoids long pipes.

SIZE OF FURNACE AND DUCTS.

To heat a room of 8,000 cubic feet the grate area should be 22 inches in diameter. The air ducts should have a cross sectional area of not less than 400 square inches at the narrowest point. For a room of from 11,000 to 17,000 cubic feet the grate area should be 24 inches in diameter and the air duct should have a cross sectional area of not less than 600 square inches. For a room from 17,000 to 22,000 (two-room building) cubic feet the grate area should be 27 inches in diameter and the air duct should have a cross sectional area of not less than 800 (two ducts) square inches.

The entire floor area, school room, cloak rooms and library room must be included in computing cubic feet.

THE SMOKE FLUE.

The smoke flue is a 10-inch or may be 12-inch cast iron pipe extending up through the large brick chimney. This is made up of 3-foot sections like sewer tile and is easily installed while building the chimney. Every joint should be anchored to the brick wall so as to hold it in place. All the heat escaping through the smoke pipe of the furnace is utilized in warming the ventilating flue. This makes a rising column of air certain, drawing the foul air out of the room. The inside measurement of the chimney is 20 by 29 inches. When iron is used a large flue for smoke is essential, as soot is likely to collect on the sides in such quantity as to choke the flue.

This chimney is the best for a basement furnace. When a room heater is used the dimensions should be as specified in No. 5.

Sewer tile may be used instead of the cast-iron pipe if the smoke flue from the floor of the basement where the smoke enters to the floor of the room is made of brick. The sewer tile may then rest on this and extend upward to the mouth of the chimney. The brick base is necessary to receive the strong heat where it enters from the furnace. This would crack the sewer tile. But when the heat has ascended two or three feet it is not hot enough to crack the tile.

A double chimney with a brick wall between the smoke flue and the ventilating shaft is not satisfactory. The ventilating shaft is not sufficiently warmed to secure good ventilation. If a double chimney is to be used, the smoke flue should consist of chimney lining. This is so thin that much heat goes through to the ventilating shaft. But to make sure it will not be cracked by the intense heat, smoke should enter a short brick flue as required when sewer tile is used. Such a double chimney is shown in the illustrations of room heaters, page 10.

Each joint should be covered with a galvanized iron band $2\frac{1}{2}$ inches in width to prevent air entering the flue should the cement between the joints fall out.

CHIMNEY INSIDE THE BUILDING.

A chimney inside the building gives the best service in a cold climate. If it is necessary to build the chimney outside, the warm air duct may be built alongside of it the same as shown in Figure A. But in this case there should be three thicknesses of asbestos paper between the brick and the metal duct which reaches from the furnace to the air entrance in the wall. This will prevent the absorption of the heat by the cold brick. When the warm air duct is built inside the room it need not be lined with metal, but the inside walls of the flue should be plastered smoothly so as to prevent friction. The same is true of the inside of the ventilating shaft.

A SURE FAILURE.

Any attempt to run the ventilating flue into the attic, expecting that a ventilator in the roof or an open window will carry the foul air out, is sure to fail. The cold air will come down most of the time.

III. STEAM HEATING.

REQUIREMENTS FOR STEAM HEATING.

No. 12. *The Fan System.*—When the fan system of ventilation is used, the warm air flues shall have a cross-sectional area of not less than eight square inches for each occupant of the room. The ducts bringing warm air from the fan into the warm air flues should be large enough so that when the fan revolves at the desired rate there is delivered in the room at least 30 cubic feet of air per occupant per minute. The vent flues shall have a cross-sectional area of not less than 8 square inches for each occupant of the room.

No. 13. *The Gravity System*.—Where the gravity system of ventilation is used the warm air flues shall have a cross-sectional area of not less than 400 square inches and the vent flues 400 square inches.

No. 14. *Air Passed Through Radiators*.—When fresh air is taken directly into the room and passed through the radiators, the combined cross-sectional area of all the openings shall be not less than nine square inches and that of the vent flue not less than 10 square inches for each occupant of the room.

No. 15. When the methods mentioned in Nos. 13 and 14 are used, each foul air flue shall be provided with a radiator of at least 9 square feet of radiating surface.

No. 16. *Moistening the Air*.—In all systems of heating ample provision shall be made to moisten the heated air.

SUGGESTIONS FOR STEAM HEATING.

The Fan or Plenum System is of two forms: In one the air is forced through radiating coils into the rooms at such a temperature and quantity as to heat the room. In the other, radiators are placed in the rooms and the purpose is that these shall furnish the heat necessary to warm the air while tempered air is forced into the room for ventilating purposes. This method is preferred in buildings of more than eight rooms. Ventilation is possible in all kinds of weather since cold as well as warm air can be forced into the rooms.

The Gravity System: This system depends upon the movement of air of unequal temperature.

Steam coils are placed in the flues which lead into the rooms. The outside air is admitted to these coils and when warmed it rises into the room. Steam coils or aspirators are placed in the vent shafts. These warm the air which then rises and passes to the outside.

This system supplies tempered air from the outside while the room is heated by direct radiation within the room. It gives fair satisfaction when properly installed in smaller buildings and when the difference of temperature between the outside air and the room air is at least 40 degrees. Window ventilation is necessary when the outside and inside air are about the same temperature.

Direct-Indirect System: In this system the foul air flue contains a steam coil to cause an upward current. Openings are made into the walls at the lower part of the room radiators. A device is used to prevent the cold air from spreading over the floor and to force it up through the radiators to warm it before it spreads over the room.

This system, usually called the "direct-indirect system," is in use in quite a number of schools in the State. In many installations not enough air is admitted. Radiators which fully meet the requirements can be secured.

Whenever any gravity system is in use, county superintendents should insist upon these being supplemented by window frame or window board ventilation.

Schoolrooms should never be heated with steam or hot water without making provision for ventilation. Because it is satisfactory in homes occupied by few people is not evidence that it will answer for schoolrooms occupied by 40 or 50 people. In schoolrooms heated in this way where the defect can not be remedied, superintendents should insist upon unobjectionable window ventilation.

To supply the school with moist air is as necessary as to supply it with clean air. In both the fan and the gravity systems a jet of steam should be allowed to escape *above* the radiating coils in the fresh air room. Warm air systems should provide ample evaporating pans so placed as to secure rapid and abundant evaporation.

A humidifier is made which utilizes the return steam from the radiators to heat water in the fresh air room causing the vapor to mix with the air entering the room. It may, also, be attached to radiators in the room. A noiseless valve attached to the radiator may also be procured.

WINDOW VENTILATION.

Every system of heating, room heaters, warm air furnace, plenum, gravity, or direct-indirect, fail to give satisfactory service in warm or cool weather. The windows must be opened. The problem is how to open windows without causing drafts on the children and to keep an even temperature.

Window Boards: This is a board 10 or 12 inches wide placed on the window sill. Wall board, lumber or galvanized iron may be used. If it is desired not to exclude the light, plate glass can be used. The board should lean inward so that the upper edge is as far in as the wall. Under this window there should be a steam radiator. When the window is raised, from 1 to 2 inches the air which blows in is directed upward instead of going straight into the room. Just above the radiator this entering current of cold air joins the rising column of warm air from the radiator. The two currents intermingle and flow out into the room above the heads of the children. When the air comes down where the children are it is no longer cold and causes no draft. On the windward side of the room the outside air also comes in between the sash. To give a more rapid change of air than the vent flue will permit, windows should be slightly opened at the top, or at the bottom on the side of the room opposite to that from which the wind blows. In this way air passes into and out of the room without currents striking the children.

Windows open at the top: Suggestions as to how to open windows are given on page 14. Strict and constant attention given to window ventilation will repay the teacher in her own health, comfort and ability to do her work more easily and better. The pupils will be better natured, quieter and more attentive and studious.

LIGHTING.

REQUIREMENTS FOR LIGHTING.

No. 17. There shall be no windows in the wall which the seated school children face. The walls shall be a soft light tint, gray, tan or very light olive green. The ceiling shall be a very light tint.

No. 18. In school buildings hereafter erected or remodeled the windows shall be at the left of the seated pupils. Windows at the back of the room are permissible, but shall be at least 6 feet from the floor.

No. 19. The windows at the left shall be set with the least possible space between them and shall be not less than 3 feet nor more than 4 feet from the floor.

No. 20. The glass surface in study rooms shall not be less than one-fifth of the floor space. When the light is from the north only or when trees are near by, it shall be not less than one-fourth of the floor surface.

No. 21. All windows shall be provided with good adjustable shades.

No. 22. In all buildings windows in the wall which the seated pupils face shall be permanently walled up, so that no light may enter from that direction.

No. 23. If there are full length windows on the right toward the front of the seated children, the lower sash shall be covered so as to completely shut out the light from that part. If this makes the light insufficient, additional windows shall be provided at the left.

SUGGESTIONS FOR LIGHTING.

The light of schoolhouses is a matter of far greater importance than people generally are aware of. The amount of reading and writing which children do in school today is quite unknown to their parents. The use of print is especially hard on the eyes of the young. The eye strain which results from bad lighting is the cause of many ills the cause of which few except the physician or the oculist know.

Light from in front is especially injurious. It shines directly into the eye while the child is looking at the printed page, causing eye strain. Though he may be able to shut it out by bending his head down or holding the book between the eye and the light, yet when he takes his eyes off the book the light flashes into them, causing a sudden readjustment of the muscles.

Light from both sides from in front of the child is quite as bad, for he is not able to escape from light coming directly into his eyes. The light coming from both sides and crossing in the eye causes eye strain. All new buildings should admit the light from the left only. When the room is more than 23 feet wide the light from one side may not carry across the room leaving one side too dark. In such cases high windows on the right side at least 6 feet from the floor should be used. These are so far above the eyes of the children that no harm is done. In the case of buildings already in use the evils of cross lighting can be mitigated by covering the lower sash of the windows on the right. Only the lower sash of the windows on the right in front of the children need be completely closed. The windows behind the pupils need not be thus closed, as from these no light comes directly into the eyes of the children.

Brown or green burlap tacked over the lower sash covers the window very well and it forms a good bulletin board on which the teacher can pin her daily program or pictures.

Most of the school rooms have not enough light. The window shades are opaque and when the sun shines the teacher draws them at least half way down. The next day is cloudy and she forgets to raise the shades. Nearly always the north windows are shaded half way down. To mitigate this evil the shades should be white or a cream color and translucent. These keep out the direct rays of the sun but admit a great deal of light.

WINDOW SHADES.

Overhead light is the best light. For this reason windows should come as near the ceiling as possible. Also the windows should not come below the eyes of the children when they are seated.

If shades are hung at the top of the window they shut out the best light. Yet if hung at the bottom so as to be drawn upward to exclude the rays of the sun, so much of the light is shut out that the children suffer.

A shade which can be adjusted to any part of the window gives the best service. If roller shades are used the best arrangement is to have two rollers at a window.

Both should be hung at the middle of the window. One shade unrolls downward and the other upward. Unobstructed light can be admitted above and below where the rays of the sun do not come in, and if the shade be translucent most of the light, but none of the sun's rays, comes in where the glass is covered. Translucent shades, either white or buff, are strongly recommended.

SEATING.

REQUIREMENTS FOR SEATING.

No. 24. Each school room shall be furnished with single desks which are of the proper size and adjusted for the pupils who occupy them.

No. 25. *One-room schools.*—In one-room schools attended by children of all ages, if stationary desks are used, they should be of five sizes No. 6, 5, 4, 3, 2.

No. 26. If adjustable desks are used, they should be of three sizes—small, intermediate, and large.

No. 27. Desks of only one size shall be placed in rows from the front to the back of the room. If it is necessary to place more than one size in the same row, the last of the smaller desks shall be a "rear" and the first of the larger desks shall be a "front" and these shall have no space between them.

No. 28. There shall be an aisle between the row of desks and the wall not less than 24 inches wide and between the rows not less than 20 inches wide.

No. 29. *Graded schools.*—If stationary desks are used and one grade occupies the room, there shall be at least two sizes suitable to the size of the children. If more than two grades occupy the room, more sizes of desks suitable to the children shall be used.

No. 30. If adjustable desks are used, they shall be of suitable size and properly adjusted.

No. 31. Floors, desks, furniture and walls shall be kept free of dust and cleaned when necessary.

SUGGESTIONS FOR SEATING.

SIZES OF DESKS.

No. 6 desks are for six and seven year old children. Grades 1 and 2.

No. 5 are for eight and nine year olds. Grades 2 and 3.

No. 4 are for ten and eleven year olds. Grades 3, 4 and 5.

No. 3 are for twelve and thirteen year olds. Grades 4, 5 and 6.

No. 2 are for those fourteen and upward. Grades 7 and 8.

No. 1 are too large for elementary school children.

DISTANCES APART OF DESKS.

No. 6 and 5 should be placed nine inches apart from edge of desks to back of seat.

No. 4, ten inches apart.

No. 3, eleven inches apart.

No. 2, twelve inches apart.

In case of children of unusual size, desks should be placed apart so that when sitting erect with back against the back of the seat, the edge of the desks come within two inches of the body.

SIZES OF DESKS FOR GRADED SCHOOLS.

First grade room, No. 6 and enough No. 5's for children of unusual size.

Second grade room, an equal number of 6's and 5's.

Third grade rooms, No. 4's and enough No. 5's for unusually small children.

Fourth grade room, No. 4's and enough No. 3's for unusually large children, and 5's for small children.

Fifth grade room, No. 3's and enough No. 4's for unusually small children.

Sixth grade room, No. 3's and enough No. 2's for unusually large children, and 4's for small children.

Seventh grade room, No. 2's and enough No. 3's for unusually small children.

Eighth grade room, No. 2's and 3's for larger and smaller children.

ADJUSTING DESKS.

The small size is suitable for the first, second, and third grade.

The intermediate size is suitable for third, fourth, and fifth grades.

The large size is suitable for sixth, seventh, and eighth grades.

The seat should be raised or lowered to a position so that when the child is seated the thigh is horizontal when the heel rests on the floor and the knee is bent at right angles

The desk should then be placed at a position an inch above the elbow when bent at right angles the upper arm hanging parallel with the body.

THE IMPORTANCE OF PROPER SEATING.

First as Affecting Health.—It has only recently been discovered that many weaknesses of the system are due to spinal malformations. The

nerves supplying the vital organs come largely from the spinal cord and through the spinal column between the vertebrae. When the spine is out of shape, these nerves are compressed and their work interfered with.

Second as Affecting Success in Life.—A misshapen person is handicapped in the contest for success in life. A well-formed body is the greatest recommendation to a young man seeking to win a place in the world's work. It is criminal negligence to compel growing children to sit six hours of the day in school desks which deform their bodies.

Third as Affecting School Work.—Good order and good school work can not be secured when children can not sit still in comfort. Many a school is hard to manage and the work is poor because the children have not comfortable seats.

RIGHT AND WRONG SEATING ILLUSTRATED.



Fig. 1.

Fig. 2.

Fig. 3.



Fig. 4.

Fig. 5.

Figures 1 and 2 show an 8-year-old boy seated on a No. 3 seat and writing on a No. 3 desk. Either posture is uncomfortable and injurious to the right development of his spine, shoulders and chest.

Figure 3 shows the boy at the same desk moved closer to the seat. This makes it better for his back, but the proper development of his shoulders is interfered with and he is uncomfortable because his heels do not rest on the floor, and the desk is too high.



Fig. 6.

Fig. 7.

Fig. 8.

Figure 4 shows the boy seated on a No. 4 seat with a No. 5 desk in front. His heels do not rest on the floor, causing too great a pressure on the nerves and blood vessels of his legs. He is able to sit still but a few minutes.

Figure 5 shows the boy seated on a No. 5 seat with a No. 5 desk in front with the proper space between. This induces the right posture and makes a wrong posture almost impossible. This gives him physical comfort and makes the proper development of his body possible.



Fig. 9.

Fig. 10.

Figures 6 and 7 show a 12-year-old boy seated on a No. 3 seat with a No. 3 desk in front. The too great distance apart causes him to assume these incorrect and injurious postures.

Figure 8 shows the boy in a proper and comfortable posture, induced by the right size of desk properly spaced.



Fig. 11.

Fig. 12.

Figures 9 and 10 show a 7-year-old child on a No. 5 seat with a No. 5 desk in front. Figure 9 shows the desk and seat too far apart. In figure

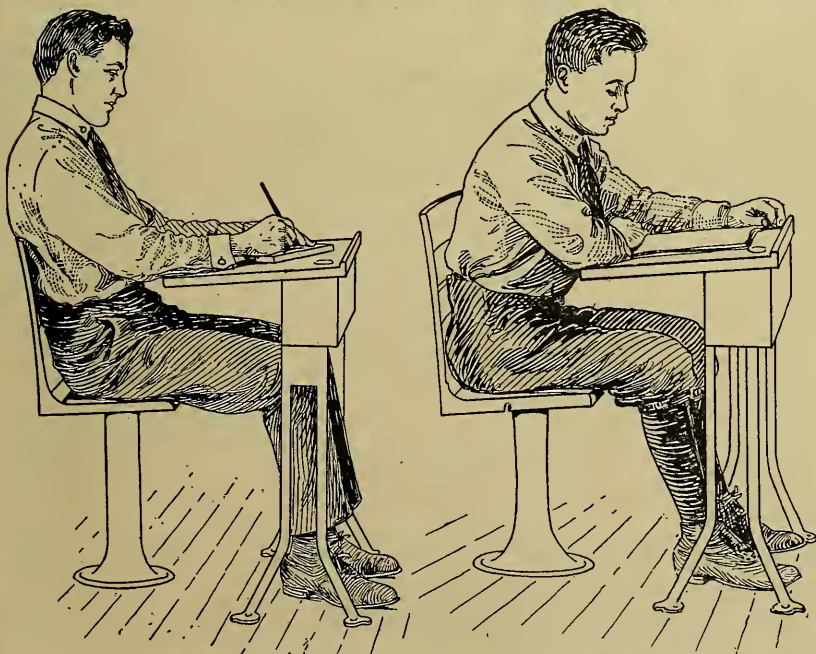


Fig. 13.

Fig. 14.

10 the desk and seat are the right distance apart, but both are too high. Six- and 7-year-old children should be provided with No. 6 desks and seats.

Figure 11 shows a 9-year-old child sitting on a No. 5 seat with a No. 5 desk in front. The seat and desk being too far apart induce the posture which will cause rounded back, a forward stoop and flat chest.

Figure 12 shows the same child properly seated, desk and seat the right size—No. 5—and the right space between. This provides every means of comfort and a chance for right physical development.

Figures 13 and 14 show a form of adjustable desk properly adjusted and spaced. These are made in three sizes—the smallest for children from 6 to 9 years; the second for those from 9 to 12 years and the largest for those over 12 years.

SINGLE DESKS THE BEST.

A school board should buy no more double desks, even if the house is already seated with double desks. If these can not be discarded, the new ones should be single. The double desks should be discarded as soon as possible. The saving in expense in buying double desks is so small as to be unworthy of consideration. The advantage of single desks is very great. Such a school is easier to teach and the pupils find it easier to study and to conduct themselves properly.

The requirement that each child shall occupy a desk by himself is justified also purely by health reasons. The probability of infection from colds, sore eyes, itch and parasites is much greater when two occupy the same desk.

WATER SUPPLY.

REQUIREMENTS FOR WATER SUPPLY.

No. 32. *Wells*.—All dug, bored or drilled wells shall be made absolutely safe from danger of contamination from privies. The walls of dug wells shall be constructed so as to prevent seepage from this source. Where there is any likelihood of sewage entering the well the privy vaults shall be made water-tight. Less than 100 feet distance from a privy is not a safe location for a well. To prevent contamination from other sources the well shall be covered with a concrete platform. This shall rest on a concrete wall surrounding the well, sunk at least 2 feet in the ground. A concrete gutter should be provided to carry the waste water at least 10 feet away from the well. The earth shall be so banked about the well as to make natural drainage and prevent puddles of water near the well.

No. 33. *Cisterns*.—Where cisterns are used they shall be provided with effective filters and shall be completely covered. They shall be thoroughly cleaned and the filtering material renewed at least once a year.

No. 34. *Water Containers*.—Where drinking water is kept in the schoolroom it shall be kept in a clean container, provided with a cover and a faucet.

No. 35. *Individual Cups*.—The use of the common drinking cup is prohibited by law. When cups are necessary each person shall be provided with his own cup. These shall be placed in a dustproof case, which shall be kept closed except when removing or replacing a cup. The cups shall be kept clean.

No. 36. *Bubbling Fountains*.—Bubbling drinking fountains are strongly recommended. No fountain should be installed which enables the lips to touch the opening of the water pipe.

No. 37. *Suspicious Water*.—If, for any reason, water used in schoolrooms appears to be unwholesome, samples shall be sent to the State Water Survey, State University at Urbana, for analysis.

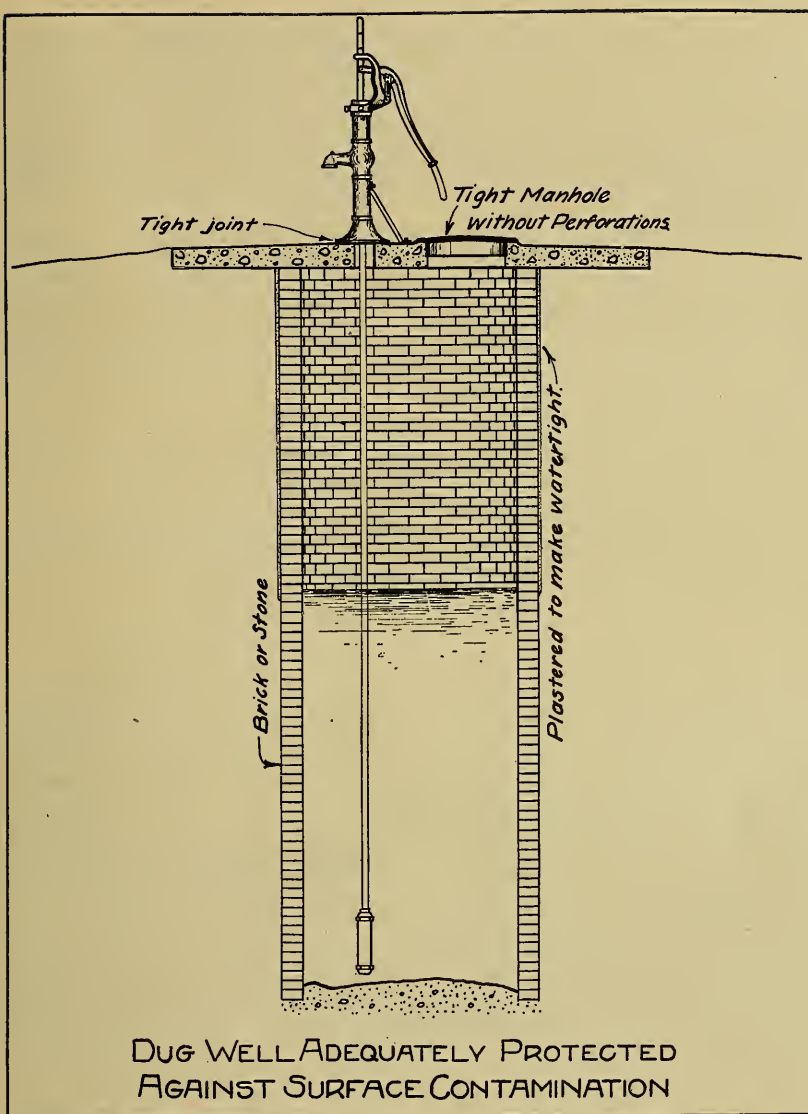


FIGURE 2. An adequately protected dug well. A well like this in suitable soil and placed at a decent distance from a privy, cesspool, drain or sewer, will yield a pure water.

—Courtesy of Illinois State Board of Health

SUGGESTIONS REGARDING WATER SUPPLY.

The schoolhouse well is looked upon as dangerous. There is no reason why it should be so if the proper precaution is taken. A dug well should be covered with a concrete top. This should rest on a concrete wall around the well, sunk 4 feet into the ground. A drain trough or pipe should convey the water to a point at least twenty feet from the well. Pools of water should not be allowed to collect within 20 feet of the well.

When a well is impossible, a cistern should be provided. The best form is a cistern of two compartments. The one should be 10 feet deep and the pump should be placed in this. The other should be built alongside and 4 feet deep. At the bottom of this should be an opening into the other, arranged so that the water which flows from the roof into the shallower one shall percolate through a thickness of 2 feet of clean sand. If care is exercised to clean these before school opens and let the water in only after the rain has washed the roof, palatable and wholesome water will be available.

It was thought that the abolition of the common drinking cup in the schools would secure greater safety from contagious diseases. Experience has shown that the individual cup in the care of the pupil is no improvement. The children keep the cups in their desks or pockets. They use each other's cup, which becomes contaminated and is quite as dangerous as the common cup. If individual cups are used they should be kept in a case with a door, each cup on its own hook. The teacher should see to it that they are scalded every few days.

The only effective way to safeguard the children against danger from the drinking cup is to install a bubbling fountain.

When the water must be carried from a neighboring well it should not be kept in an open bucket in the schoolroom. Dust collects on the water, which water may be the worst contamination.

A water tank or cooler with a self-closing faucet should take the place of the open water bucket if the water must be kept in the house and the bubbling fountain can not be at hand.

TOILETS.

REQUIREMENTS FOR TOILETS.

No. 38. *Indoor toilets.*—When indoor toilets are provided those for the different sexes shall be approached from different directions and if there is a door between the two toilet rooms it shall be kept locked. The toilet rooms shall be ventilated in such a way as to remove all odors and prevent their spread to other parts of the building.

No. 39. *Outdoor Toilets.*—There shall be at least two toilets, one for each of the sexes. They shall, when possible, be at least 50 feet apart. Under no condition shall they be less than 20 feet apart. When the distance between the toilets is less than 50 feet, there shall be a tight board screen midway between them at least 20 feet long and 6 feet high. The approaches shall be separate all the way.

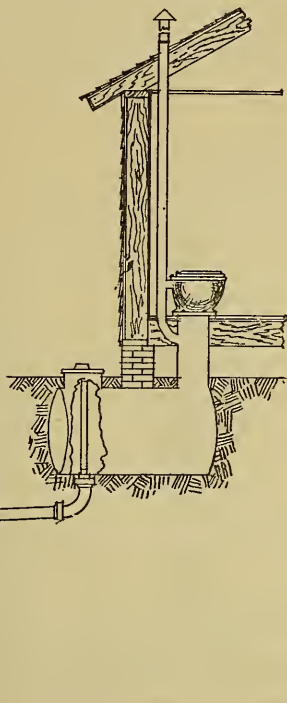
No. 40. The boys' toilet shall have a tight board screen at the front and the side not less than 5 feet high. Behind this shall be substantial zinc lined urinal troughs. The lower one shall be 16 inches from the ground and the higher one 26 inches from the ground at the highest point. When dry closets are used the urinals shall drain into a separate underground receptacle.

No. 41. The toilet buildings shall rest on a substantial brick or concrete foundation to which they shall be securely bolted. The buildings shall be well lighted and shall constitute an adequate protection against inclement weather. There shall be at least two seats and not fewer than one seat, for every 20 children using them. One or more seats shall be 10 inches high, the rest 16 inches.

Where there is danger of contaminating the well the vault shall be concrete, so constructed as to prevent leakage of sewage and so that it may be cleaned. Light shall be completely shut out of the vault. The seats shall be provided with covers, securely hinged in such a way as to close automatically. The vault shall be ventilated with a flue, with a cross-sectional area of not less than 64 square inches and extending from the vault through the roof. One of the chief aims is to shut out flies, which spread contagious diseases.

No. 42. All toilets shall be kept clean and the walls free from objectionable language or pictures.

SUGGESTIONS REGARDING TOILETS.



Antiseptic Tank or Chemical System for One-room-Schools.

There are a great many different forms of furnishings for indoor toilets. The following points should receive careful attention.

WHEN WATER PRESSURE AND SEWERS ARE USED.

1. The surface exposed to soil should be porcelain or fire enamel. Even these require constant cleaning by the janitor.
2. Each seat should flush independently and automatically.
3. The most satisfactory seats and urinals are those which provide for a current of air from them into a ventilating shaft.
4. The room should also be provided with a ventilator at the top of the room.
5. Air should be admitted from the outside in such a way as not to blow in for this tends to carry the air from the toilet room into other parts of the building. This may be accomplished by placing under the window sash a frame covered with cheesecloth. This admits air but prevents a strong current.

6. The floor and walls should be of a material which will not absorb water or moisture.

7. The urinal is the source of most objectionable features. It is very difficult to prevent the presence of odors. If a sufficient number of seats can be constructed that the seats, when not in use, rise to a perpendicular position and expose the bowl, it is advisable to dispense with the urinals.

When antiseptic or chemical tanks are used the provisions mentioned in the foregoing also apply. The form which provides drainage is most satisfactory. It prevents the accumulation of soil and does not require its removal.

DISPOSAL BY DRYING AND BURNING.

This method is satisfactory only when the means of ventilation are perfect and when the greatest care is exercised in its management. It is not recommended.

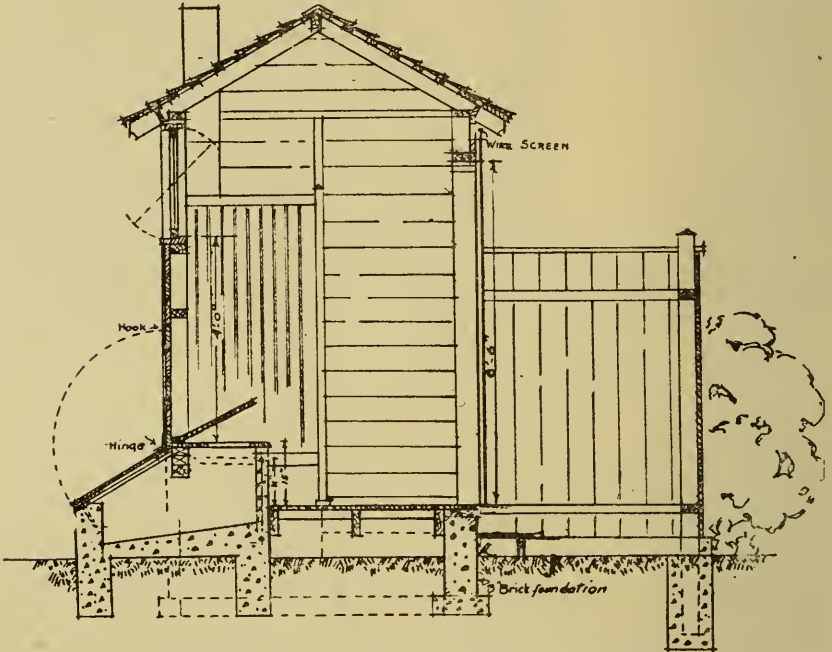
INDOOR TOILETS FOR ONE-ROOM SCHOOLS.

There are many objections to toilets separate from the school building, even when the best provisions are made for decency and health. The antiseptic or chemical tank which provides for drainage, makes it possible to remove all these objections.

When a new house is built, room for toilets may be provided connecting with the cloak rooms. When old buildings are in use, an addition may be built to the house which provides entrances from the schoolroom. The cost will not be materially more than it is for building two outhouses and concrete walks to them.

Many of these have been used during the last year. So far as we have been able to learn they are very satisfactory.

The only fault to be found is with the urinal in the boys' toilet. Too much attention is required to keep it clean. It is not necessary and



INDOOR TOILETS FOR ONE-ROOM SCHOOLS.

should not be installed. It has also been found that cheap imitations have been sold at the same price as the good one. The enameling has been found to be badly cracked in a few months. Before purchasing directors should be sure that the material is durable. Porcelain bowls only should be purchased.

DOUBLE OUTHOUSES.

The summer of 1920 should record the abolition of every double privy for the use of both sexes. Where the proper distance apart is impossible, the tight screen and the completely separate approaches should be provided.

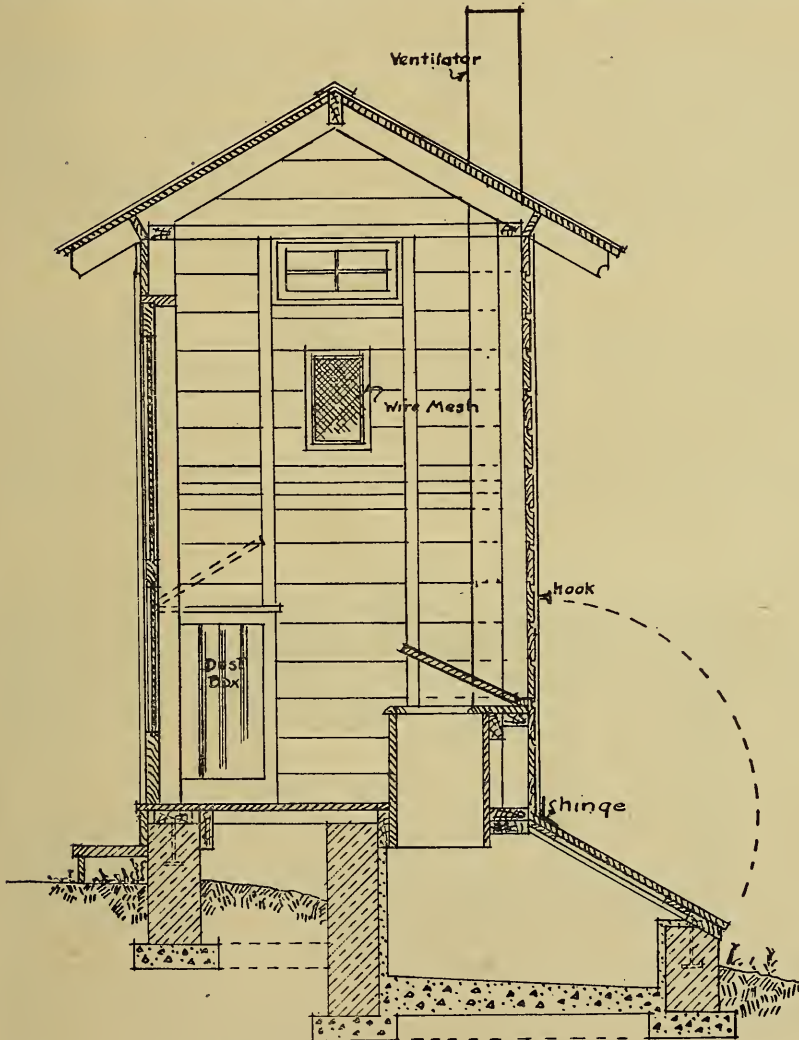
BOYS' CLOSET.

Experience has abundantly proved that if the boys are given a chance their closet will be kept reasonably clean. When the seats only are provided it is impossible to keep them clean. When the urinal is in the same room as the seats more care to keep the place clean is required than boys are likely to take. When the urinal is outside very few go into the building, and it is kept clean.

The urinal trough should not drain into a water-tight vault. A separate underground receptacle can be provided.

WATER-TIGHT VAULTS.

Water-tight vaults are necessary when there is danger of polluting the well. The vault, in most cases, will not need to be emptied except just



before the opening of school in the fall. The contents will then be dry and the work of its removal will not be disagreeable.

KEEPING OUT FLIES.

There is no greater source of disease than privy vaults exposed to flies. In parts of the State where the hardpan is near the surface and drainage

is impossible, schoolhouses and even home privies have no vaults at all. There, also, typhoid fever is always present and often becomes epidemic.

Properly constructed vaults will make it possible to completely shut out flies, and so prevent them from carrying disease germs to the food of the children. Typhoid fever will then be as rare as it is in parts of the State where drainage is possible.

VENT FLUE.

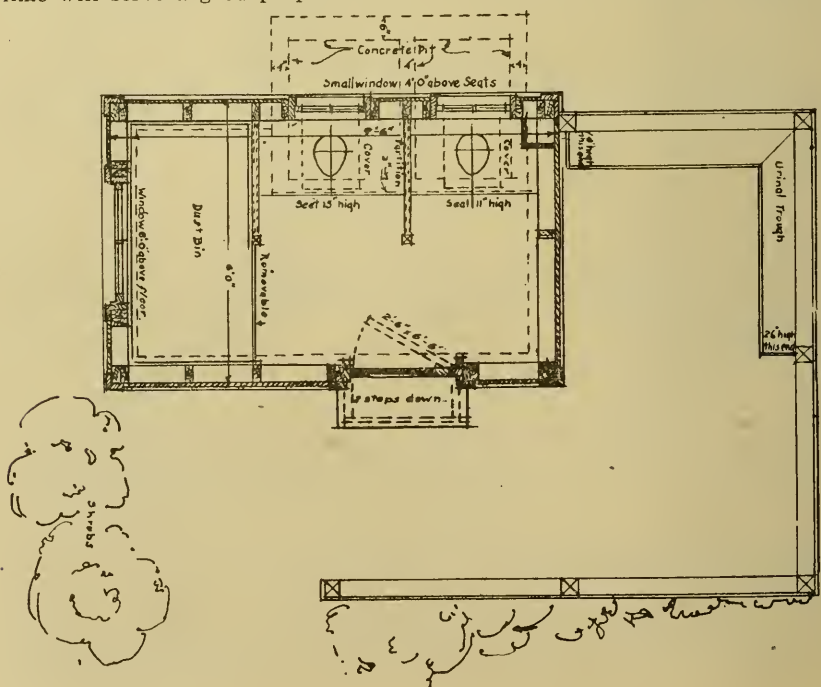
The vent flue is a necessity. If the vault is tight enough to exclude flies and the seat openings closed, there will be, while the closet is in use, a draft of air out of the vault through the vent flue, securing the wholesomeness of the room.

The purpose of the covers for the seats is to keep out flies and to aid in making the room as wholesome as possible. Great care should be taken in their construction. The board should have a cross piece to prevent its splitting. The hinges should be strong and of brass that they may not rust and become inoperative. The cover board should extend back from the opening at least 6 inches so as to give plenty of room.

PLAN FOR OUTDOOR TOILET.

The plan offered and the bill of materials are for a larger house than is generally required in country districts. When the school is small a house 5 by 6 feet is large enough. Twenty inches wide across the end will be sufficient room for a dust box. The dust bin is not needed when the vault is deep and not water-tight.

A water-tight vault is strongly recommended. No other should be used except when the character of the soil affords good drainage and when there is absolutely no danger that a well will be contaminated. When possible, deep vaults should be drained and then dust need not be used, but slacked lime will serve a good purpose.



SCREEN SCHOOLHOUSE DOOR AND WINDOWS.

Wire screens for doors and windows of schoolhouses are of great service. They lessen the chances for the spread of disease by flies. They add greatly to the comfort of the children and make it easier to do their school work. When not needed they can be stored, and will last several years.

BILL OF MATERIALS FOR BOYS' CLOSET.

Shingles, 4 bundles.	Matched siding, 220 sq. ft.
Rafters, 5, 2"x4"x14'.	Unmatched, 70 sq. ft.
Ridge, 1, 2"x4"x10'.	Fence (matched lumber) 150 sq. ft.
Plate, 2, 2"x4"x16'.	Floor (toilet matched lumber), 50 sq. ft.
Wall Plate, 1, 2"x6"x12'.	Partition, 30 sq. ft. $\frac{7}{8}$ T. & G.
Studs, etc., 16, 2"x4"x16'.	Dust box, 70 sq. ft. (matched).
Joists, 2, 2"x8"x10'; 1, 2"x8"x14'.	Urinal trough, 2, 1"x12"x12'.
Fence posts, 3, 4"x4"x16'.	Ventilator, 2, 1"x8"x10'.
Stringer, 5, 2"x4"x10'; 1, 2"x2"x16'.	

MILL WORK.

2 seats and lids.	Concrete, 5 cu. yds.
2 windows and frames (glass 18"x24").	Nails.
2 windows and frames (glass 18"x24").	Paint.
1 door and frame (2' 6"x6'x6").	

SAFETY AGAINST FIRE.

THE LAW.

An Act to regulate the egress from public buildings provides that the doors to the entrance of school buildings shall be so hinged as to open outward.

An Act relating to fire escapes provides that in school buildings of more than two stories, at least one fire escape shall be provided, and that in halls above the ground floors as many fire escapes shall be provided as the corporate authorities may direct.

MINIMUM REQUIREMENTS.

No. 43. *New or Remodeled Buildings.*—In school bulidings hereafter erected boilers shall be placed in fireproof rooms.

No. 44. In buildings more than one story high boilers or furnaces shall not be placed under a stairway or corridor through which the pupils pass in leaving the building.

No. 45. Outside doors within 20 feet of stairways shall be provided with an appliance which will cause the door or doors to swing outward when pressure is applied.

No. 46. Smoke flues shall be lined with a good quality of chimney lining or so constructed that should the mortar between the bricks fall out, fire can not escape through the opening.

No. 47. The stairway from the grade level to the first floor should not be less than 6 feet wide. The stairway from the first to the second floor should not be less than five feet wide. If there are two stairways used at the same time, these may be four feet wide. The number of rooms in the building must be taken into consideration.

No. 48. All air ducts or ventilating shafts shall be of metal or fireproof material.

Buildings Already in Use.—In buildings which were in use July 1, 1915, the county superintendent of schools shall note any hazardous conditions and call the attention of the school board to them. If, in his judgment, these are decidedly dangerous for the safety of the children, and if the school authorities do not remedy the defect, he shall enforce the law by first calling for the advice of the State Fire Marshal.

SANITARY INSPECTION.

OF

District No.....County

.....Co. Supt.

Date.....192....

The numbers before the topics in this sheet are the same as the number of the requirements in this section beginning on page 9. For a detailed explanation for each item the reader is asked to read these requirements and the suggestions which follow.

The county superintendent should record his inspection on this sheet and deliver this pamphlet to the clerk or secretary of the board and should keep a copy for his office files. Check sheets separate from the pamphlet, will be furnished for this purpose.

Boards of directors or boards of education should, upon receipt of this record of inspection, confer with the county superintendent at their convenience about the improvements to be made as is required by law.

Building.....

Upon careful inspection I note the following conditions and make these suggestions:

[illegible]

SUGGESTIONS TO DIRECTORS.

SECTION II. STANDARD SCHOOLS.

The State Superintendent of Public Instruction will recognize as a standard school and will award a diploma and marker to schools which meet the requirements set forth herein. The diploma is an attractive document which can be framed and hung on the walls of the schoolroom. The marker is a plate four by twenty-four inches bearing in gilt letters the legend STANDARD SCHOOL suitable for placing above the door on the outside.

The purpose is to give a definite and an attainable aim for directors, teachers, and pupils. To attain this aim is evidence that the best has been done by the community to give its children a fair chance for the benefits of a good school. To know just what needs to be done to make a good school possible is often not an easy matter for those who have not made a study of the problem. In the provisions set forth, the essentials are made definite and the directors and the patrons can be assured that no money is squandered in providing these things.

The method is for the county superintendent, the teacher and the directors, and the pupils as well, to determine that they mean to make the school worthy of recognition. Then provide the things called for and so organize and conduct the school. The county superintendent decides whether the conditions have been met. If they have, he recommends the school to the State Superintendent for recognition. But before the county superintendent undertakes to do this he should call on one of the state supervisors of elementary schools to spend several days with him to inspect schools which claim to be up to standard. This will enable the county superintendent to clearly interpret the requirements, taking into consideration the various conditions and circumstances. The state supervisors will also be pleased to meet school officers individually or in meetings to confer with them about the best interests of the schools. When a school is inspected for standardization either by the state supervisor or the county superintendent, the directors should be present that the occasion may be most helpful to all concerned.

ONE ROOM SCHOOLS.

REQUIREMENTS FOR STANDARDIZATION.

SANITARY CONDITIONS.

In heating, ventilation, lighting, seating, water supply, toilets and safety against fire, the schoolhouse and equipment must meet the requirements of the law, as set forth in Section I.

THE YARD.

- 1.. Ample playground.
2. Good approaches to door and outhouses.
3. Convenient and serviceable fuel houses.

THE SCHOOLHOUSE.

4. House well built, in good repair, including paint.
5. Good tight foundation.
6. Attractive interior decorations.
7. Clean floors, walls and furniture.
8. Good blackboards, some suitable for small children.
9. Two good cloakrooms. The one for girls should have one entrance

only and that from schoolroom with a bench which can be used as a lounge.

FURNISHINGS AND SUPPLIES.

10. Two good pictures. (See State Course.)
11. Good teacher's desk.
12. Good bookcase.
13. Good collection of juvenile books suitable as aids to school work as well as general reading.
14. Set of good up-to-date maps.
15. Good globe.
16. Suitable dictionaries.
17. Thermometer.

SCHOOL ORGANIZATION.

18. School classified to do the work of the State Course of Study
19. Classification and daily register well kept.
20. Definite program of study.
21. Program of recitation.
22. Pupils' reading circle, organized and being done.
23. At least seven months' continuous term.
24. Attendance regular.
25. Discipline: Instruction and spirit of the school good.

THE TEACHER.

26. Education: Equivalent of a high school course.
27. Salary not less than \$50 per month.
28. Ranked by the county superintendent as a good or superior teacher in a scale of poor, fair, good, superior.
29. Must meet the county superintendent's requirements for professional interest and growth.

For greater detail read the following. The number of topics are the same.

STANDARD SCHOOL

SUGGESTIONS IN DETAIL.

THE YARD.

1. The playground should not be less than one-half acre. It should consist principally of an open level space. The trees and shrubbery should be around the border of the lot. It should be well drained so that water will not collect in low places.

2. There should be a concrete walk from the schoolhouse door to the gate and to the well. Concrete walks to the toilets are not required except where water or mud makes them necessary.

3. The coal house should be attached to the schoolhouse and entered from the schoolroom. When this is not feasible it should be near the schoolhouse but not in front of it where it spoils the looks of the premises. It should be so built and painted as not to detract from the attractiveness of the house and grounds.

THE HOUSE.

4. The house must be in good repair on the outside, well and attractively painted.

5. There must be a good foundation that will help to keep the floor warm in cold weather. The only holes in it should be those intended for the ventilation under the floor and these should be closed in cold weather. Newspapers stuffed into the openings will close them effectively.

6. The interior should be properly decorated as specified on page 70 under "Tinting the Walls." If the walls are papered, a plain paper should be used, never a dark color nor a figured paper. When paint is used a "flat paint," not a glossy one, should be used.

7. When sweeping, a preparation should be used which prevents the dust from rising. When dusting, a cloth moistened with water or oil should be used. Dust must not be allowed to settle on the furniture nor in the corners of the room and the halls. When desks have become soiled and marred, the tops should be planed, revarnished or cleaned as may appear most feasible.

8. Blackboard should be, preferably, of slate, though other good material may be used. Some of the blackboard should reach within 26 inches of the floor for the use of the small children.

9. It is not well that 30 children should live six hours each day in one room, with no place where there may be privacy for the girls. To have the shoes and clothing in the same room is not conducive to training in habits of housekeeping. The vestibule as a place for the clothing is objectionable in many ways. When a new house is built there is no reason why two separate cloakrooms may not be provided. In old buildings it is usually easy to provide cloak rooms. (See page 79.)

FURNISHINGS AND SUPPLIES.

10. There should be two good pictures adapted to schools. These should be worthy of a good frame and glass. Advertisements and trashy pictures should find no place on schoolroom walls.

11. The teachers' desks should contain compartments which can be locked and one of them should be suitable to contain records.

12. The best bookcases for schools are those known as sectional cases. As many sections as are needed may be bought and another may be added when needed. Too often the bookcase is the receptacle for all kinds of use-

less material. It should contain books only and they should be systematically and tastefully arranged.

13. The books should be selected with three objects in view: First, to secure books which are suited to the age and advancement of the pupils; some for every grade. They should be interesting and have a wholesome influence upon the reader. Second, books which are supplemental to the school studies, books on geography, history, nature study and classical juvenile literature. Third, books of reference, such as a good set of cyclopedia written especially for school use. The encyclopedias of many volumes written for scholars should not be bought except for high schools.

14. The maps should be modern. Those more than ten years old are of little value. Every school should have a map of the United States, of the State, and of the continents.

15. A good 12- or 16-inch suspended globe, together with the maps found in the geography and history texts, and those recommended in 14, make a good working outfit.

16. Better service will be obtained from two or more copies each of two grades of dictionaries—common and high school grades—than from the large edition costing about \$12. Besides those for common use, each pupil should have his own dictionary suitable to his advancement.

17. A thermometer is essential. The sensations of the teacher can not be depended upon to regulate the temperature. She may be very warmly dressed and keep the room too cool for the children. She may be so thinly dressed that the room will be kept too warm for the children. The thermometer should be hung as near the floor as the shoulders of the seated children and the temperature maintained at from 68 to 72 degrees.

SCHOOL ORGANIZATION.

18. The one-room school, containing as it does pupils of all ages and all stages of advancement, must be organized into a harmonious working body. Organization requires the grouping of pupils, the allotment of time, the assignment of duties so that both pupil and teacher may work to the best advantage.

The State Course of Study provides the plan of organization. It divides the work of the course into eight years, or grades, and each grade into classes. If all classes of the eight grades were present the divisions would be so numerous that the teacher could not do justice to all.

The most successful scheme to secure fewer classes and yet do the least injustice to any is known as alternation. The work is so arranged that two grades may work together doing the allotted work of two years. But the year's work is done in the reverse order from the year before. In this way the classes required for three years of the course are dropped out, with little detriment to the children. The State Course of Study contains a detailed statement of the plan of alternation.

19. If the school is actually organized a record of that organization can be easily made. The record also serves a good purpose in this, that it gives the teacher a clearer idea of just what the organization is. There are two forms which are in general use which answer the purpose well. If the record is complete, it is not only a history of what has been done, it is such a description of the school that a new teacher can take up the work where the former teacher left off. By this means a school once started does not end. Vacations come, but the school exists and goes on.

20. There should be a definite time for a class to prepare its lessons. Such a program is outlined in the State Course of Study. Not to have a definite time to prepare each lesson will give the teacher endless trouble. If the pupil is kept at work at his desk, the problem of discipline during school hours will be solved.

21. Care should be taken to properly divide the time for recitation. Some recitations require less time than others. The State Course of Study contains a sample program.

22. The first aim of the school is to give proficiency in the school arts. The child should learn to read, to write, to spell, and to figure, to speak

and write the English language effectively, and to secure a fair knowledge of the world in which he lives and of the history of his country. It is the first duty of the teacher to see that these things are well learned. The habits of continuous application and accuracy formed by doing this work well will be quite as useful as will be the knowledge gained. This hard and sometimes irksome work must be done or the school is not the greatest success possible.

But the child's progress in knowledge gained from books depends upon a ground work of ideas. Unless he has these ideas and the words to express them, his mind is up against a wall. To understand what is told him by the teacher or the book is almost impossible. Because he does not get on in his books, he is considered stupid. Many a child starts to school familiar only with a hundred words and the ideas which they express. These have served his purpose in the intercourse of his humble home. Others who come from cultured families have a vocabulary of four or five hundred words. They are considered gifted children because they understand so readily and have such interesting thoughts. Yet the child from the uncultured home may have the better mentality. The task of the teacher is to give the children ideas and the words to express them. When they reach the fourth grade they are expected to get their ideas and words largely from the texts which they study. The children not brought up in an intellectual home find this interpretation of the book very difficult.

The child has learned how to read when he reaches the last quarter of the first grade. If now he is supplied with interesting books, nine-tenths of the words are familiar to him; he will get the other tenth without difficulty. He advances to a more advanced book. This, too, he understands and adds ten or twenty per cent to his stock of words. If this is kept up by the time he reaches the fifth and sixth grade, he will have no difficulty in interpreting his textbooks.

The knowledge and the skill obtained from the mastery of the school subjects constitute the elements of an efficient mental equipment. They are the tools with which the pupil can work out a successful career. They are, however, of little value unless a good use is made of them and the disposition to use them is established. In addition to giving the pupil a mastery of the school subjects, the school should exert a strong influence in creating in the pupil a good point of view, a right attitude towards life and its work.

Probably the strongest influence that can be brought to bear upon the child to turn his thoughts and purposes to the living of a right life is found in the reading of good books. Through reading he becomes interested in what has been done and what may be done to make life better. His aspirations are awakened, his ambition aroused, and he seeks to realize in his own life work and conduct the things in which he has become interested. Good books become his teachers and have the same influence upon the growth of his character that does the companionship of worthy people.

THE ILLINOIS PUPILS' READING CIRCLE.

To make it possible for the schools to get the necessary books at the lowest cost in the easiest way the Illinois Pupils' Reading circle was organized by the State Teachers' Association twenty-five years ago. Publishers submit their books for adoption. From these are selected each year thirty of the most suitable books and over three hundred titles are kept on hand. Thus the best books from numerous publishers may be ordered and delivered by parcel post in a few days.

D. F. Nickols, Lincoln, Illinois, will give promptly any information desired.

THE LOAN OF BOOKS FREE OF CHARGE.

The State of Illinois will supply any school district with all the good books it can read. The only expense to the district is to pay the express or postage, usually less than \$1.

A collection of forty or fifty books may be kept a year or a part of a year and another set obtained.

Write for application cards and information. Address Illinois Library Extension Commission, State house, Springfield, Illinois.

23. To be a legal school the term must consist of at least seven months. To be considered a standard school this term must be continuous and taught by the same teacher, unless the change is made for cause. A five months' term taught by a well-paid teacher and a two-months' term taught by a poorly paid teacher can not be recognized as a seven months' continuous term.

24. The attendance must be regular, averaging at least 90 per cent.

25. The discipline and spirit of the school must be rated by the county superintendent as "good" or "superior" in a scale of fair, good, superior.

THE TEACHER.

26. Education: The teachers' schooling must be that afforded by a four-year course in a recognized high school. If not a graduate of such a school, successful experience for three years may be taken as the equivalent.

27. The salary of the teacher must be at least \$50 per month.

28. The teacher's character, skill and success must be ranked by the county superintendent as "good" or "superior" in the scale of poor, fair, good, superior.

29. Professional interest and growth must meet the requirements of the county superintendent for the renewal of certificates.

A SUPERIOR ONE-ROOM SCHOOL.

Many school officers have expressed themselves in favor of having not only the essentials of a good school, they want their school to be as nearly right as it can be made. To encourage this laudable desire a diploma is now offered to a superior one-room school.

A standard school is a good school having the necessary equipment and taught in a house which is well adapted to the purpose and in a sanitary condition.

A superior one-room school is one taught by a teacher of superior qualifications and with the highest efficiency, in a house that is as nearly perfect in all the essentials as possible and furnished with everything needed. The community must show the interest that the claim of such a school implies.



The Door Plate.

AWARDING THE DIPLOMA.

The awarding of this diploma should be made to serve to arouse the interest of the surrounding territory. It is suggested that all the schools, the school directors and the people within reach of the school be invited to be present, that a suitable program be provided to entertain the visitors. If desired, the Superintendent of Public Instruction will be present and award the diploma. Such an occasion should result in several standard and superior schools in the vicinity.

REQUIREMENTS FOR A SUPERIOR ONE-ROOM SCHOOL.

In addition to the requirements for a standard school a superior school must have the following:

1. At least one acre of schoolyard, neatly fenced, covered with a good sod and planted with trees, shrubs and flowers, concrete walks to the entrance and to the closets.

STANDARD SCHOOLS BY COUNTIES.

Illinois.	Number of one-room schools.	Number of standard schools.	Number of superior schools.	Number of standard graded schools.	Illinois.	Number of one-room schools.	Number of standard schools.	Number of superior schools.	Number of standard graded schools.
Adams.....	155	23			Livingston.....	231	43	1	
Alexander.....	21	17		7	Logan.....	103	131		9
Bond.....	67	15		1	Macon.....	116	161	2	
Boone.....	65	40		3	Macoupin.....	150	11		
Brown.....	60	4			Madison.....	109	42		8
Bureau.....	167	34	1	1	Marion.....	121	21		1
Calhoun.....	33				Marshall.....	72	36		4
Carroll.....	96	69		7	Mason.....	85	61		1
Cass.....	58	37			Massac.....	40	23		
Champaign.....	201	23		2	McDonough.....	136	53		3
Christian.....	127	24			McHenry.....	120	3		
Clark.....	92	12		1	McLean.....	231	186		3
Clay.....	94	5		1	Menard.....	48	17		
Clinton.....	59	3			Mercer.....	102	16		
Coles.....	118	69			Monroe.....	50	17		
Cook.....	102	7		20	Montgomery.....	134	59		
Crawford.....	90	30		2	Morgan.....	94	36		
Cumberland.....	81	23		2	Moultrie.....	75	9	1	
DeKalb.....	130	75		1	Ogle.....	157	107		3
DeWitt.....	86	68		3	Peoria.....	124	59		
Douglas.....	79	31			Perry.....	65			
DuPage.....	65	2			Platt.....	89	69		2
Edgar.....	125	11			Pike.....	146	2		1
Edwards.....	45	11			Pope.....	63	10		
Effingham.....	70	5		4	Pulaski.....	27	24		1
Fayette.....	119	10			Putnam.....	21	10		
Ford.....	102	47		2	Randolph.....	89	19		1
Franklin.....	80	5			Richland.....	80	13		3
Fulton.....	183	46			Rock Island.....	79	4		
Gallatin.....	53	10			Saline.....	75	6		
Greene.....	85	21			Sangamon.....	140	117	1	6
Grundy.....	83	71			Schuyler.....	82	28		
Hamilton.....	78	7			Scott.....	39	8		
Hancock.....	158	15		1	Shelby.....	153	7		
Hardin.....	29	1			Stark.....	61	20		1
Henderson.....	64	40	2	1	St. Clair.....	99	70		12
Henry.....	172	55		2	Stephenson.....	125	78		1
Iroquois.....	213	99		1	Tazewell.....	109	98		1
Jackson.....	85	102			Union.....	68	52		3
Jasper.....	102	6		1	Vermilion.....	170	42		
Jefferson.....	129	24			Wabash.....	43	29	1	
Jersey.....	59	10			Warren.....	115	36	2	1
Jo Davies.....	108	58			Washington.....	75	33		1
Johnson.....	58	12			Wayne.....	143	10		
Kane.....	106	78		3	White.....	93	7		
Kankakee.....	130	1			Whitesides.....	128	121	1	
Kendall.....	67	54		1	Will.....	168	35		1
Knox.....	157	35			Williamson.....	86	21		2
Lake.....	76	31	1	1	Winnebago.....	99			2
LaSalle.....	241	19		6	Woodford.....	101	96	2	9
Lawrence.....	66	32	2	2					
Lee.....	149	98	1	4	Total.....	10,613	3,771	26	164

2. A well or cistern equipped with a sanitary drinking fountain within doors.

3. Besides the schoolroom, there shall be a basement, work and play-room, a cloakroom for each of the sexes and a library room.

4. The library shall contain at least 80 juvenile books, 10 suitable for each grade, a good school encyclopedia, suitable dictionaries and a supply of the bulletins published by the National Government and the University of Illinois useful in the school and in the community.

5. The pupils must be enrolled in the Illinois Pupils' Reading Circle and pursue the course of reading under the direction of the teacher and county superintendent.

6. A manual training bench and tools, equipment for sewing and for instruction in elementary agriculture. These subjects shall be taught to pupils prepared to receive such instruction.

7. There must be in operation a parent-teachers' club which secures the hearty cooperation of the parents with the school.

8. When the teacher under whose administration the school was recognized as "superior" ceases to teach the school, it must be reinspected to remain so recognized.

9. The teacher must hold a first grade elementary school certificate which is granted only to graduates of recognized normal schools or to those who have an equivalent preparation.

From the foregoing it is clear that before a school can be recognized as "superior" it must be taught in a house in every respect suitable to the best work, must be equipped with everything necessary, must be taught by a teacher of superior qualifications and skill, the course of study must be well done by the pupils, the people of the district must cooperate to make the school superior in every respect. The work of the teacher, the pupils and the patrons is of first importance, the house and equipment are secondary.

Before asking for inspection with a view to being recognized as a superior school, the school should be thoroughly inspected by the county superintendent to make sure that all the requirements have been met.

If in his judgment the school is up to requirements, he should arrange with the Superintendent of Public Instruction for a date for the inspection by one of the supervisors of country schools.

If it meets with approval, a date should be arranged with the State Superintendent for dedicatory exercises.

ILLINOIS SUPERIOR SCHOOLS.

The trend in educational progress in recent years has been strongly toward relating all school activities closer to life—the child's present and his future life. The criticism on the schools of the past is that they related to books only. This movement is sometimes designated "vitalizing the school" or "vitalizing education".

The consolidated school lends itself more readily to this kind of progress. There are more teachers, more pupils, more parents interested in the school and in the community life. This magnifies the importance of the school and its activities. Interest and enthusiasm are generated. There is more "life", hence, a greater interest in an improved life. When such interest is aroused, progressive, forward-looking ideas and purposes are more readily and kindly received.

While it is more difficult to arouse this interest in the best things for the children in the one-room schools, it is not impossible. Communities which are really interested in the best things for the children and have the leadership by the board and the teacher, can have what they want.

The Superior One-Room School is the realization of these ideals. It differs from the usual school in this,—that it has a teacher who not only teaches the school subjects in a superior way, but also has a definite idea of child life and needs, and has the skill to direct the activities which give the child the completest and most wholesome school life. She does not instruct and discipline only. She instructs and influences and in such a way that learning and wholesome living occupy the children's full time.

She is also interested in the people in her district, secures their cooperation in the better life of the school.

The Superior school has a board of directors who have this vision of the better school. They cooperate with the teacher and support her in all her endeavors. They supply the material needs and encourage teacher, pupils and parents to do their best for the school.

The Superior schools can exist only in a community in which the people are friendly with each other, pull together for the best things in community as well as in school life, where they are willing gladly to take part in meetings at the school house where parents and teachers and children for a short time, live together to the best purpose.

THE HAWTHORNE FARM SCHOOL.

LAKE COUNTY.

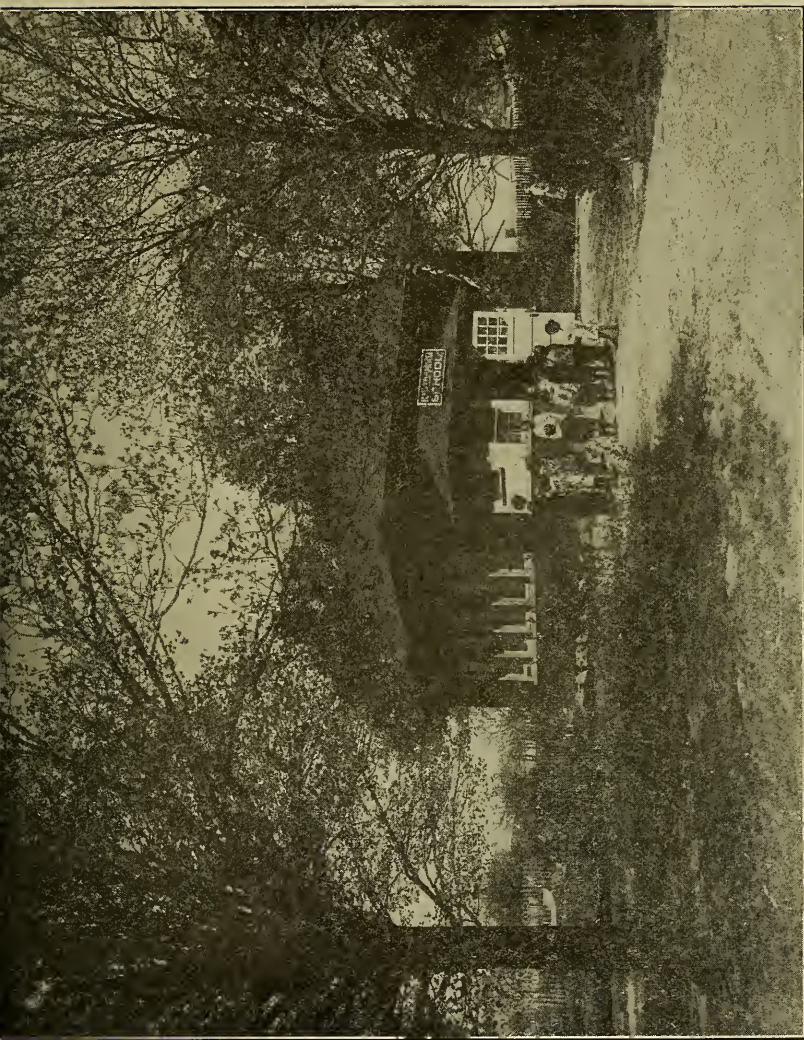
When this school was first inspected in 1908, it was found that a house had been erected to ornament the landscape. The outside was well designed for this purpose. The inside was not at all suited to school purposes. It was heated by a bare stove and had no provision for ventilation. It was furnished with the desks from the old house, all too large for the children. The cheapest teacher was employed. The inspector was strongly impressed that there was something dead about this place.

Because of the good house, the county superintendent wanted this to become a Standard School. He worked for, and the board secured a better teacher. The teacher helped to reach the goal of standardization. The stove was jacketed and ventilation was provided. New desks were installed, library books were procured. The school was recognized as Standard in 1912. It was the 526th in the State so recognized.

The Sanitation law went into effect in 1915. The house then did not meet the requirements of the law. The basement which was a junk room was enlarged, a furnace and indoor toilets were installed, a good room was provided, the windows shaded with translucent shades, and the walls were properly tinted. The county superintendent suggested that this might now become a Superior School. The only thing now lacking was a Superior teacher. The board requested him to recommend one. She was employed at \$800 a year, almost double what previous ones had received. She determined to make the school superior, first by teaching and conducting her school in a superior way, second, by securing the required equipment and interesting the community in the school to the degree where the people would do their part. As a result of her effort her salary was voluntarily raised to \$1,000. The State inspector found every thing satisfactory. The school was dedicated by the Superintendent of Public Instruction in 1919. After this the people were so well pleased with the school that the teacher's salary was voluntarily raised in the middle of the year to \$1200. This was done because it was thought she *earned* it. The school is to these people the center of the community life. From it they think they are getting the thing of greatest worth for their children—a chance to grow into a satisfactory manhood and womanhood, both in knowledge and in character.

During the years the school was developing from a makeshift to a Superior school, the State inspector noted the great change in the children. It was even more noticeable than the change in the school house. There was the painful timidity, the stolid indifference, or the staring curiosity to be found in so many of the perfunctory schools in isolated communities. The school work was slouchy and stupid. Now the children meet the stranger with open eyes and the steady look, are respectful yet cordial and ready to reply to what is said to them. They are at ease and wide-awake, for they have confidence in themselves and in those whom they meet. In their school work they are alert, diligent and persevering. They recite their lessons as if they knew something and want to tell it. Their delightful oral reading is a great contrast to the former drawing intonation, the ludicrousness of which they were wholly oblivious.

Parents who do not appreciate the change are a curiosity. These parents do.



THE HAWTHORNE FARM SCHOOL.
Beautifully situated among the trees and shrubs. Wholesome outdoor life shared by the teacher.



Everybody at his proper work and enjoying it, because it is satisfying.



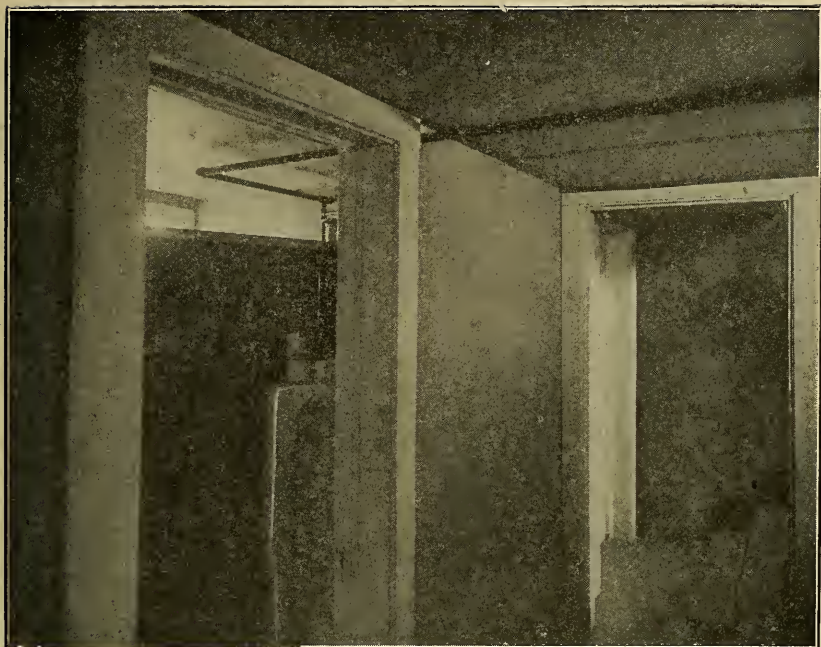
Life here is too full of good things to be squandered in idleness and mischief-making. The teacher can teach and the pupils can study. For all the conditions are favorable and the studies are made interesting.



These two girls and the boy are taking their turn in putting the finishing touches on the hot lunch just before the noon recess. This is a part of life and should be part of an education. The lunch is good, but the greatest good to the children comes from what they do to get the good out of it.



Is not this a better way to get ready to live than the old way: grab a hunk and run, or munch it out of a pail. How to act when invited out will not be an embarrassing question with these young people. Here are taught some of the most practical things in or out of the course of study.



Glimpse of the boys' toilet in the basement. The most demoralizing influence in the entire life of a country child is exerted by the school outhouse. Everything was suggestive of foulness and depravity. Here every objectionable feature is removed. Absolute cleanliness prevails. Children cannot congregate or loiter. No suggestion of depravity. The boy has at least a chance to grow up with a clean mind.

HOW THEY MANAGE WARM LUNCHES.

This is in reply to your letter asking for information as to the plan of serving hot lunches at the Hawthorne Farm School.

Perhaps we are more fortunately situated than most rural schools because the delivery wagons from Libertyville go by the door every day and whatever is ordered in morning is delivered in time for the noonday lunch.

I have three girls in seventh and eighth grades; one of these is appointed each week alternately to be in general charge, she chooses two of the other pupils, boys and girls alike to assist her.

The one in charge makes the menus for the week and does the ordering from the grocery, she also notifies the milkman how much milk to leave at the school; she makes some of her preparations at recess time. I try to arrange the classes so that she can be excused at eleven thirty to complete her tasks. The assistants are excused at the same time, they set the table and then serve the others; after lunch is eaten these assistants clear the table and wash and put away the dishes.

If you wish to have me write about our equipment, I shall be glad to do so. Or if I can write more fully about our lunches, I shall be glad to do so.

Sincerely yours,

Adelaine Miller, Libertyville, Ill.

ASSISTANCE FROM THE UNIVERSITY OF ILLINOIS.

The Department of Home Economics in the University of Illinois is prepared to give assistance to schools desiring to establish hot lunches. Super-

intendents or teachers desiring information should apply to Miss Mary Pack, specialist. The following letter is self-explanatory.

In reply to your letter asking for information concerning our work with the Hot School Lunches in the State I wish to say that we have 221 schools now serving the Hot Lunches. Last year the work was new, and therefore more difficult to start. In McLean County forty-three schools served the Hot Lunch. This year McLean County has sixty schools serving the Hot Lunch. Last year La Salle had twenty-six schools serving the Hot Lunch, and this year sixty-five schools are serving the Hot Lunch. In every case we find it much easier to establish Hot Lunches where some school has been carrying on the work in the County.

Our plan is not to serve a meal at the school, but to have our older girls and boys prepare some simple hot dish as cream soup or cocoa.

As you know in Lake County, Mr. Simpson has been pushing the Hot Lunches. He arranged to give the girls a grade in the way they carried on Hot Lunches. This grade is to be averaged in with their final grades. Vermilion County offers the teachers special credit for conducting Hot Lunches. A number of the other Superintendents have also stated that they were willing to do the same.

If this is not exactly the material which you wanted I will be glad to answer any further questions.

I have been out of the office, and so did not receive your letter before.

Sincerely, Mary Pack, School Lunch Specialist.

THE BELMONT SUPERIOR SCHOOL.

HENDERSON COUNTY.

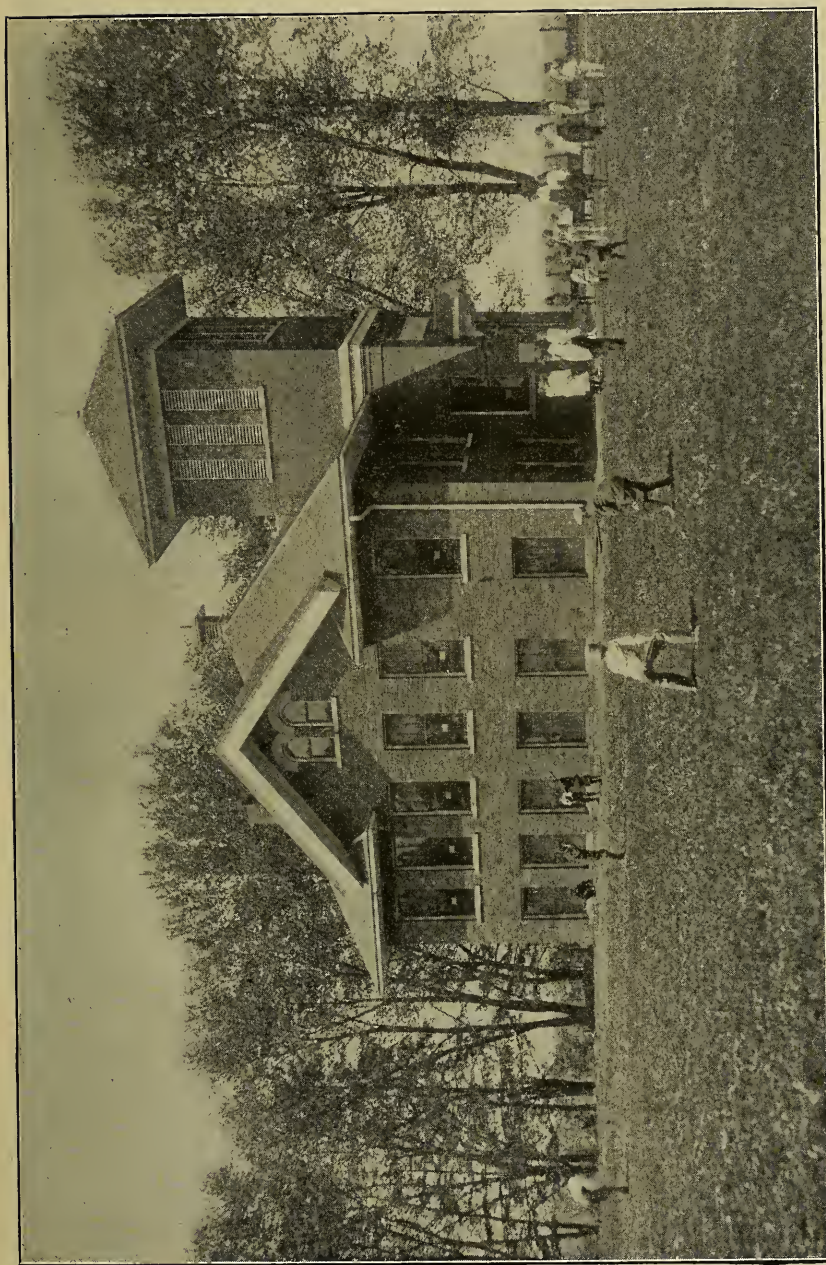
This school is situated in a community which has been "friendly" for many years. It is a large district containing $9\frac{1}{4}$ square miles of good land. The assessed valuation of the property of the district is \$175,000, one-third actual valuation. The revenue derived is \$2,187 for educational purposes, and \$1,750 for building purposes, total, \$3,975. The rate of taxation is \$2.25 on \$100 assessed valuation. There are 41 families in the district, 57 children enrolled, 22 families own and till their own land, 19 families are tenants, 30 families are active in church, farmers' institute, lodges and clubs.

The house stands on a two-acre lot of level land and cost \$10,000 (before the war). The community church is just across the road. It is, and has been a live church since pioneer days.

The district has always taken great interest in its school and is proud of the reputation which it maintains. Several years ago having caught the new spirit which came in with the standardization movement, a new frame house was built which met with the requirements for a standard school. The house burned to the ground. The people decided that a Superior school only was good enough for them. This brick structure was erected. It was dedicated by the Superintendent of Public Instruction in 1917. It was a great occasion, occupying a full day. Pupils and teachers who attended or taught the school fifty and sixty years ago, came, some from great distances. The speeches were largely reminiscent and highly enjoyable. The community and the school renewed their lives on that day. The beneficial effects will extend far into the future.

On this central spot the life of the community is centered. Here the children are trained in intellectual and moral effort. In the church the spiritual interests of the young are awakened and nurtured. Here young manhood and womanhood are united to take up the duties and joys of the fathers and mothers who are passing. Here the sorrowing are consoled and the aged approach the sunset of life with confidence and few regrets: for this has been a pleasant sojourn. The oncoming men and women can be proud of the past life of the community and look to its future with hope, for they have had better opportunities than their parents, and they will be able to do more. So should it be everywhere.

The school house was not built simply to keep school in: it was designed to live in. Teachers are employed with whom it is well for the children to live. The parents also, enter largely into the school life.



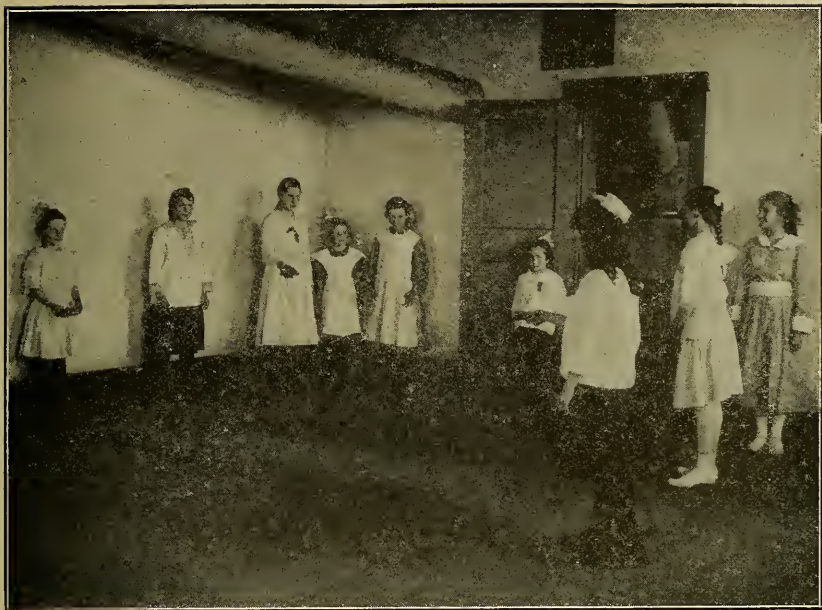
The Belmont School. Note the high basement. It costs no more to build above than below the ground. The room is worth much more.



Front entrance to school room and basement. It seems to extend a welcome to all who approach.



Interior of the room of the upper grades.



A child's life expresses itself and is developed through play. Play is a child's work. Here it is wholesome.



The men and women of the Belmont Community in fifteen years from today. This is not a "bunch" of scrubs.



"Let us live with the children" was a great exhortation to teachers by a teacher. A dozen mothers and one father are living up to the sentiment here.



The teachers' living room in the school house. This adds greatly to the teachers' comfort and helps much to make the house a school home for the children.

TABLE OF INFORMATION.

The following table gives some of the facts about these schools that may be of interest to those who are thinking of trying to reach this standard.

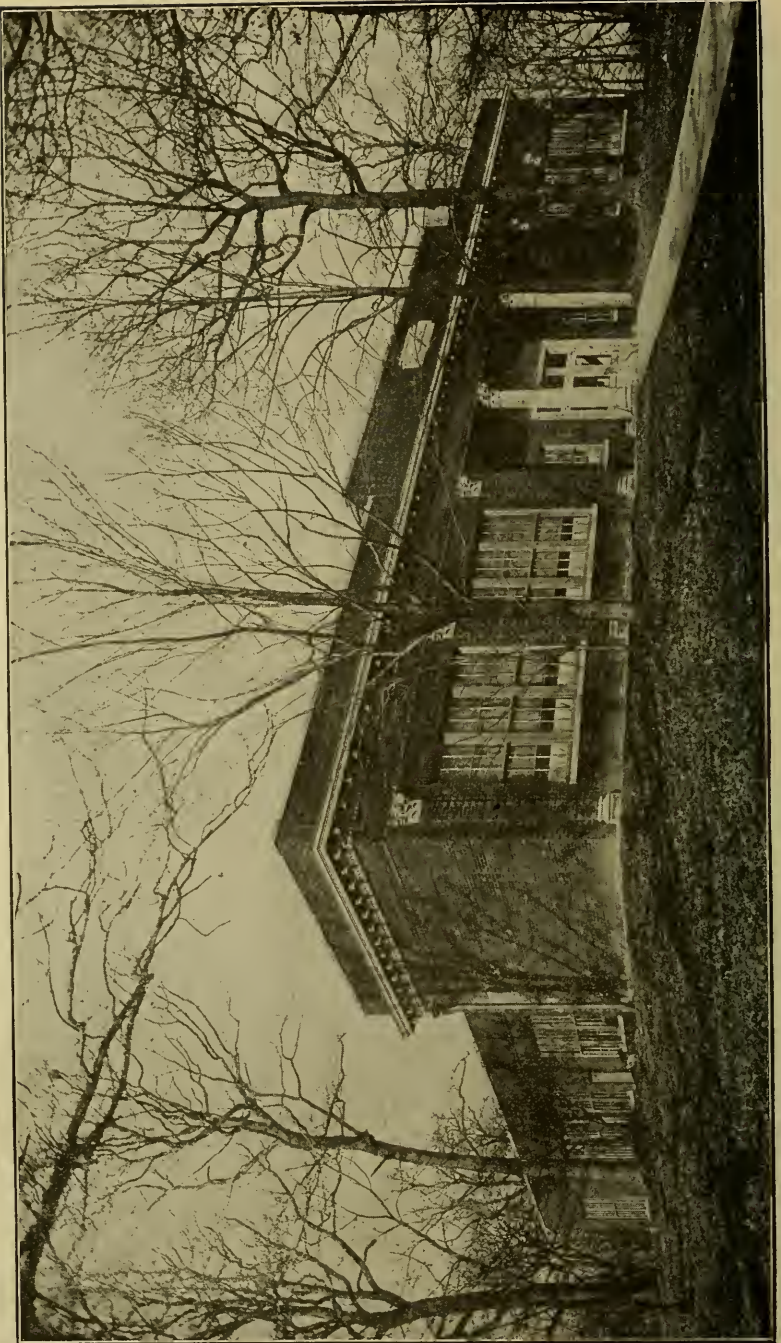
By subtracting the sum of land owners and tenants from the number of families in the district, the families not land owners or tenants may be determined. In most cases where the tax levy and the rate of tax is unusually high payments are being made on the building. About \$1,200 annually is the cost of these schools; the salary of the teachers is near \$1,000 a year.

Eight other schools have been recognized as Superior, but have not continued to meet the requirement. In most cases it is due to the fact that a teacher was not employed who could do what was required. In some cases the community failed to do its part.

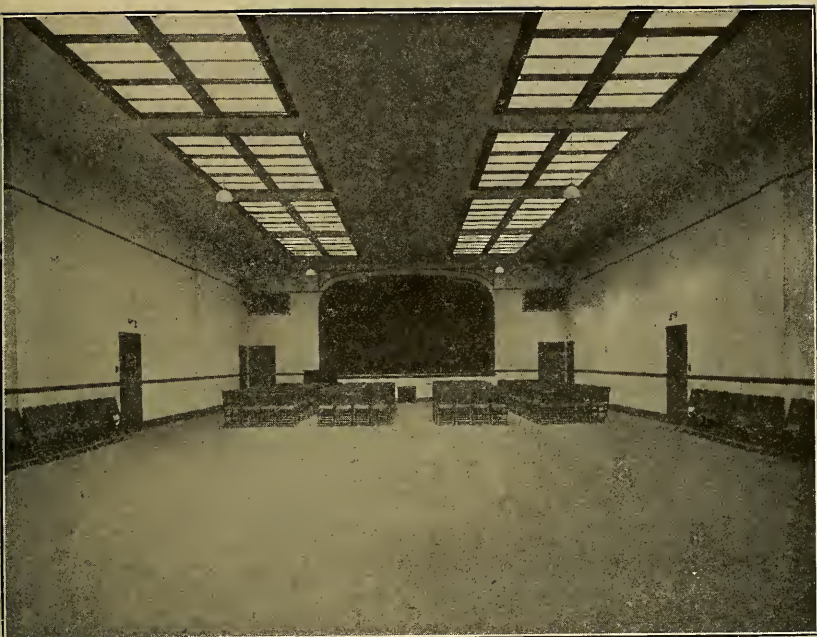
County	Dist. No.	Date of recognition.	Area of Dist. —Sq. Mi.	Assessed valuation.	Tax Levy.	Rate of tax.	Cost of house.	Enrolment.	Families in Dist.	Land owners.	Tenants.
Warren.....	46	1912	6½	\$251,923	\$1,700	\$.76	\$4,000	30	27	12	15
Moultrie	13	1913	4	80,275	1,125	1.40	2,100	32	21	12	4
Bureau.....	33	1914	5½	96,836	1,300	1.37	3,500	28	32	8	10
Logan.....	44	1914	5	117,716	1,200	1.04	4,000	13	19	6	6
Logan.....	19	1914	5½	137,498	1,300	.93	5,560	29	15	1	11
Warren.....	95	1914	3½	149,898	1,200	.65	3,500	33	62	5	17
Logan.....	180	1916	6	148,341	1,200	.83	4,500	30	24	7	7
Logan.....	200	1917	9	300,846	2,600	.90	4,200	25	23	2	13
Henderson.....	63	1917	6	81,548	1,400	1.75	3,850	22	25	11	14
Henderson.....	69	1917	9½	175,000	3,937	2.25	10,000	35	41	22	19
Whiteside.....	58	1917	5½	113,962	1,334	1.17	3,500	21	25	12	13
Sangamon.....	10	1917	9½	194,092	2,600	1.38	3,700	41	35	16	7
Woodford.....	55	1918	5½	134,610	1,135	.85	4,500	34	40	14	10
Logan.....	95	1918	6	138,542	1,500	1.12	2,800	13	20	6	11
Lake.....	73	1919	7	205,000	1,742	.85	8,000	25	22	3	19
Wabash.....	35	1919	6	127,384	800	.70	3,700	39	33	20	13
Logan.....	42	1919	5½	161,219	2,500	1.59	5,500	16	20	7	10
Dupage.....	29	1920	5½	212,675	4,000	1.90	6,000	24	38	19	18
Dupage.....	39	1920	4½	198,495	3,720	1.88	7,000	11	19	10	3
Moultrie.....	34	1914	4	75,786	1,000	1.15	2,500	23	21	10	11



District 29, Dupage County.



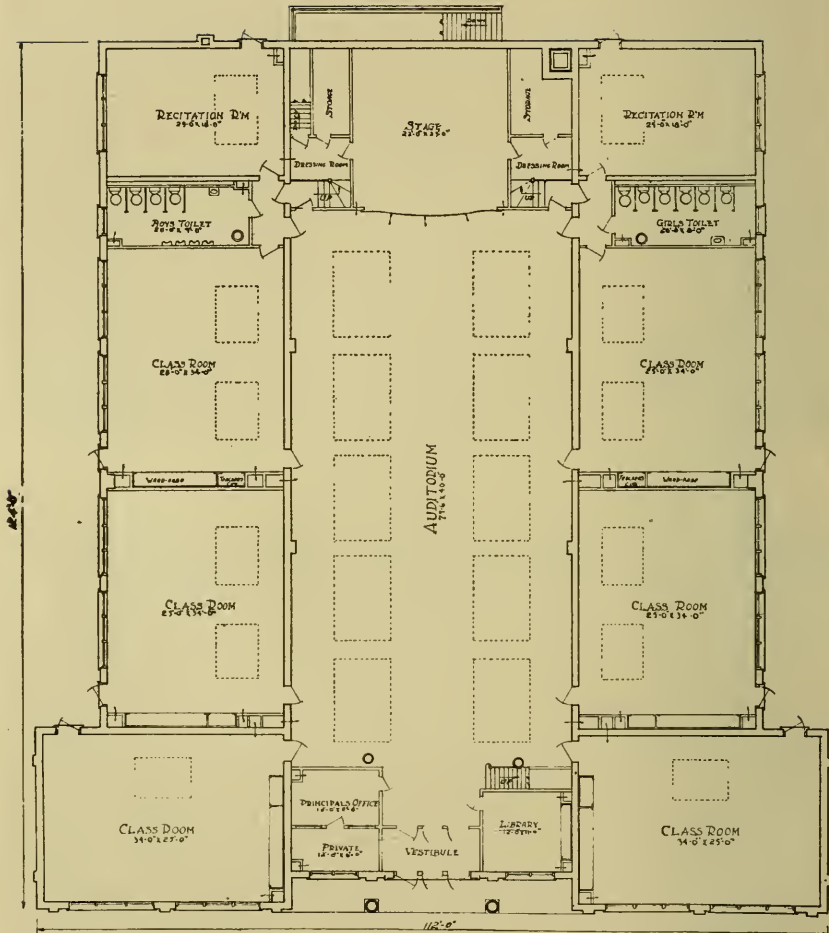
HIGHWOOD GRADE SCHOOL.



AUDITORIUM, HIGHWOOD GRADE SCHOOL.



CLASS ROOM, HIGHWOOD GRADE SCHOOL.



-FIRST FLOOR PLAN--

GRADE SCHOOL.
HIGHWOOD, ILL.

GRADED SCHOOLS.

REQUIREMENTS FOR STANDARDIZATION.

Graded elementary schools will be recognized by the State Superintendent upon inspection by one of the supervisors of elementary schools as standard schools. A suitable diploma will be awarded. These are also classed as standard or as superior. Two forms of diplomas are offered to standard schools. One is granted to those which meet the minimum requirements, the other to those which meet additional requirements. The schools which meet all the requirements for the very best are recognized as superior.

Experience has shown that an effort to standardize his schools gives the superintendent increased power with his board to get the things which are needed to make the best schools. In his recommendations to his board he has mentioned several things. The board grants some of them, but are in doubt about others. Considerations of economy and lack of insight cause them to postpone some of the improvements which the superintendent knows are the most essential. His recommendations corroborated by the state office often bring results.

Upon invitation of the superintendent, a state supervisor will make the inspection and either recognize the school as standard or will suggest what needs to be done to merit such recognition.

In the following list of requirements, reference is made to pages in Section II and paragraphs under "Suggestions in Detail," page 42 where the topic is treated more fully. The starred (*) topics are requirements in addition to the minimum, and necessary for the second form of diploma. It is thought that schools in towns and smaller cities are able to meet the first and have good schools. In larger and wealthier districts the second are possible. The requirements for the superior diploma can be met only by the schools which are in the forefront of modern educational progress.

FOR A STANDARD ELEMENTARY SCHOOL.

I. Physical Conditions and Equipment.

- | | | |
|--|---|---|
| <ol style="list-style-type: none"> 1. Heat, Ventilation and
Safety against Fire, Page 8. 2. Light, Page 20. 3. Desks, Page 21. 4. Water Supply, Page 26. 5. Toilets, Page 28. 6. Grounds, Page 42. | } | <p>Must meet minimum requirements
of law. See Section I.
* More than the minimum.</p> |
|--|---|---|

Ample, well-kept school yard, paragraph 1, page 42.

Good walks, paragraph 2, page 42.

Convenient provision for fuel, paragraph 3.

7. Building.

Outside in good repair, paragraph 4.

Suitable cloak rooms, paragraph 9.

Good floor and kept clean.

* Indoor toilets.

* Bubbling fountains.

8. Blackboard.

Ample and not too high from floor, paragraph 8.

Good quality.

9. Walls and ceilings, paragraph 6.

Properly tinted and clean.

10. Maps and globe, paragraph 14-15.

11. Library.

Books suitable to the grades in the room, in number equaling at least the enrollment, paragraphs 12-13.

12. General furnishings.

A good teacher's desk, paragraph 11.

A good bookcase, paragraph 12.

Dictionaries, paragraph 16.

Supplementary readers.

Copies of all text books for the use of the teacher.

Thermometers, paragraph 17.

* Reference books, paragraph 13.

Crayon, erasers, paper towels, sweeping preparation, measures, scissors.

Pictures, paragraph 10.

* Primary apparatus and material.

II. Teaching Force and Organization.

1. Supervision.

Whole school under the direction of superintendent or principal who shall have one-fourth day daily (*one-half day) for supervision.

Truant officer employed and truancy prevented.

2. Teaching and Discipline.

All teaching and discipline must be good throughout the school.

3. Qualification.

Each teacher must have a certificate which meets the legal requirements.

* Normal school training or an equivalent is required.

4. Professional Growth.

Teachers must conform to the County Superintendent's plan for professional growth.

5. Teachers' Meetings.

Superintendent or principal and teachers meet regularly for consultation and professional study.

* Parent-Teachers' organization, monthly meetings.

6. Classification.

Pupils properly classified, regular study and recitation periods, paragraphs 18-20.

7. Course of Study.

The State Course or its equivalent in use; supplemented by the:

Pupil's Reading Circle, or equivalent work, paragraph 22.

* Manual training and household economy.

8. Examinations and Reports.

Reports to parents of pupil's progress, and calling attention to defective sight, hearing or other physical disabilities.

9. Salary and Term.

No teacher to receive less than \$70. (*\$80) per month for eight (* nine) months.

10. Board Meetings and Janitor.

School Board to hold monthly meetings at which the superintendent or principal is present. An efficient janitor, who shall be under the direction of the principal or superintendent in his relations to teachers and pupils as in other duties.

11. Enrollment.

Not fewer than fifteen, nor more than forty-five pupils per teacher.

12. Standard of Work.

School must do good work. If school does only eight years of work, pupils must be well prepared for high school. If district maintains a high school, it must conform to the requirements for a recognized high school. (See Cir. 142.)

III. Supervision.

1. Supervision must be active and effective.

IV. Standardization.

1. A representative of the State office will make the inspection. If the requirements under I, II and III, are met, a diploma will be granted.

FOR A SUPERIOR ELEMENTARY SCHOOL.

I. Physical Conditions and Equipment.

1. Heat, Ventilation and
Safety against Fire.

2. Light.

3. Desks.

4. Water Supply.

5. Toilets.

6. Grounds.

} Must meet the requirements of
the law in a superior way in
every particular.
(See I.)

Ample, well-kept school yard.

Good walks.

Convenient provision for fuel.

Ample play grounds.

School garden.

7. Building.

Outside in good repair.

Suitable cloak rooms and play rooms.

Good floor and kept clean.

Indoor toilets.

Gymnasium and equipment.

Bubbling fountain.

Auditorium or assembly room.

Shower baths.

8. Blackboard.

Ample and not too high from floor.

Good quality.

9. Walls and Ceilings.

Properly tinted and clean.

10. Globe and Maps, geographical and historical.

11. Library.

Books suitable to the grades in the room, in number equaling at least double the enrollment.

12. General Furnishings.

A good Teacher's desk in each room.

A good bookcase in each room.

Dictionaries.

Supplementary readers.

Reference books.

Copies of all text books for the use of the teacher.

Thermometers.

Movable desks in First and Second grades.

Crayon, erasers, towels, sweeping preparation, measures, scissors, and all necessary primary material.

Play-ground apparatus.

Piano, organ or victrola.

Wall pictures.

II. Teaching Force and Organization.

1. Supervision.

School must be under the direction of a superintendent and principal and both shall have time daily for supervision.
The services of a trained school nurse.
Truant officer employed and truancy prevented.

2. Teaching and Discipline.

All teaching and discipline must be excellent through out the school.

3. Qualification.

Each teacher must have a certificate which meets the legal requirements. Must be graduates of a recognized normal school or higher institution or of approved efficiency.

4. Professional Growth.

Teachers must pursue a course of reading or training which will secure satisfactory professional growth.

5. Teachers' Meetings.

Superintendent, principals, supervisors and teachers meet regularly for consultation and professional study.
Parent-Teachers' organization.

6. Classification.

Pupils properly classified, regular study and recitation periods.

7. Course of Study.

The State Course or its equivalent in use, supplemented by the:
State Pupils' Reading Circle, or equivalent work.
Kindergarten, music, drawing, physical training, household arts and manual training, with sufficient equipment and supervision.

8. Examinations and Reports.

Reports regularly to parents of pupil's progress, and calling attention to defective sight, hearing or other physical disabilities.

9. Janitor.

The janitor service must be excellent and the janitor must be under the direction of the superintendent and the principal in his relation to teachers and pupils of Illinois.

10. Board Meetings.

School board to hold regular meetings at which the superintendent or principal is present.

11. Enrollment, Salary and Term.

Not fewer than fifteen, nor more than forty-five pupils per teacher. No teacher to receive less than \$80 per month for nine months.

12. Standard of Work.

The work must be characterized throughout by excellence.
The relations among teachers and between teachers and pupils and among pupils, must be wholesome and inspiring.
If district maintains a high school, it must conform to the requirements for a recognized high school. (See Cir. 142.)

III. Supervision.

1. Both general and special supervision must be superior.

IV. The Award.

1. A representative of the office of the Superintendent of Public Instruction will make the inspection and if the requirements are met, the Superintendent of Public Instruction will award the diploma and list the school on the records of his office as a Superior Elementary School.

III. SCHOOLHOUSES.

ONE-ROOM SCHOOLHOUSES.

The schools are never good enough. As society improves, the schools become inadequate and must be improved. The good school for yesterday is a poor school for today. Many of the one-room schoolhouses will be replaced by new ones within a very few years. It should be the aim of all to make these as good as possible. They will remain fifty or sixty years. It costs no more to erect a house well suited to the purpose than to build one of the old type. The plans and specifications herewith presented were prepared by a competent architect with the assistance of those who have had long experience in country school work.

Two hundred or more of these houses have been built in the last few years. The outside is not always the same and this is not essential. The lighting, cloakrooms, fuel room, porch and entry, heating, ventilation, and seating should be strictly followed. Some have made the mistake of changing the lighting, putting windows in front of the seated children. This is highly detrimental to the eyesight of the children and does no good whatever. Some have thought to improve the plan by placing doors from the entry to the cloakrooms. This makes proper conduct on the part of the children much more difficult and gives the teacher much more trouble.

If directors will consult the county superintendent when they decide to erect or improve a schoolhouse, they will receive prompt and valuable assistance.

PLAN FOR A GOOD ONE-ROOM SCHOOLHOUSE.

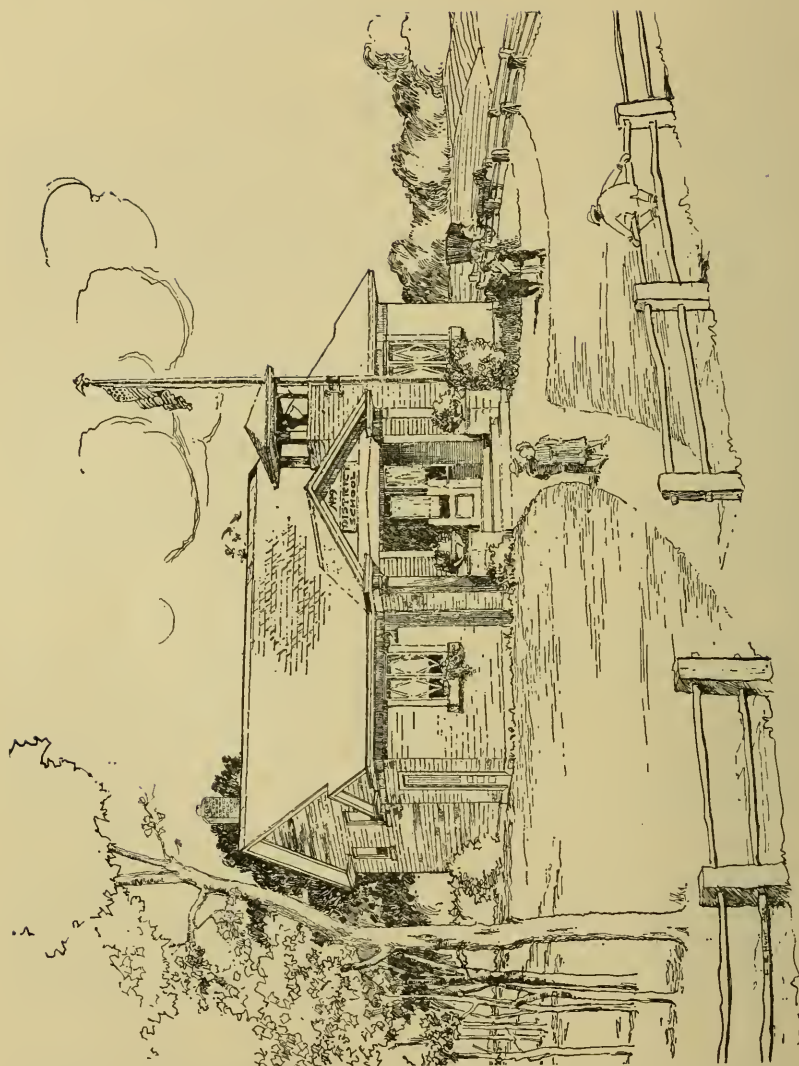
In planning the one-room school building herein described great care has been taken to meet all the requirements of a comfortable, sanitary, convenient school home for the children. The architect has succeeded in devising an exterior which is most pleasing. It suggests a home as well as a school. A number of houses have been built after this plan and they are fully up to expectation. The house can be built of wood, brick, or concrete blocks.

The specifications found on another page are for a house of wood. The outside dimensions are 32 by 33½ feet. The schoolroom is 23 by 31 feet. The library room is 8 by 9 feet. One cloakroom is 4½ by 9 feet and one 6 by 9 feet, and the vestibule 6 by 9 feet.

The vestibule is intended for entrance only. There are to be no hooks on the walls, but good pictures may be on the side walls, high enough to be out of the reach of children. A wire mat should be on the porch and in the vestibule a large foot mat. These will prevent carrying dirt into the schoolroom. Double doors should be placed both inside and out and the upper half of both sets should be of glass, that the teacher may see what is going on in the vestibule.

THE COAT ROOMS.

Separate coat rooms for boys and girls are essential. Girls especially need a place where they may be safe from molestation. The larger room should be assigned to the girls. Above the door there should be a transom which should be open at all times and the door should not reach the floor within four inches. This will insure heating and ventilation of the coat rooms. In each of these are large closets with shelves in which the lunch pails may be kept. Coat hooks should be strong and well fastened to the



Perspective of Modern One-room Schoolhouse.

wall. No entrance should be placed between the vestibule and the coat rooms. The only entrance to the coat rooms should be in view of the teacher. This arrangement greatly lessens the difficulty in discipline.

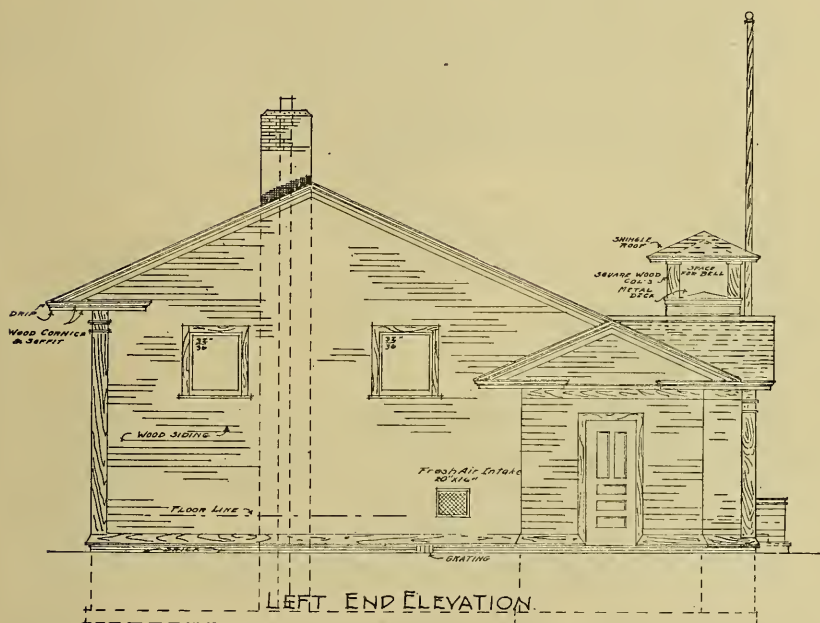
When indoor toilets are to be installed in the cloak rooms the closets should be enlarged and the toilets placed in that space.

PLAN FOR SEATING.

In the floor plan on page 72 the middle row should be No. 6's, the row to the left No. 5's and to the left of that No. 4's, to the right of the row of No. 6's should be No. 3's, and to the right of this No. 2's. This arrangement brings the little ones near to the teacher where she can easily look after their needs. It separates the advanced from the intermediate pupils, a very desirable condition.

The seats should be in line in front, but need not be so in the rear.

Two 7-foot benches and the front seats afford enough recitation seats. They should be so placed that pupils and teacher may pass between them.



There should be no platform for the teacher's desk. It is of no use whatever, is in everybody's way and is a great draft on the teacher's energy.

THE FUEL ROOM.

It is a great hardship for women teachers to have to carry coal from a distant part of the yard. The fuel house very frequently does not protect the contents from rain and snow. The fuel room should have a concrete floor. The door to the room should be close fitting so that dust does not enter when coal is being placed in the fuel room. Both outside and inside doors should be protected by planks which can be placed as the bin fills up and can be removed when they are not needed. This room should be lined with heavy lumber, behind which should be building paper, so that dust may not escape.

When building a new house the cost of this room is much less than a separate coalhouse and the convenience of it is worth much.

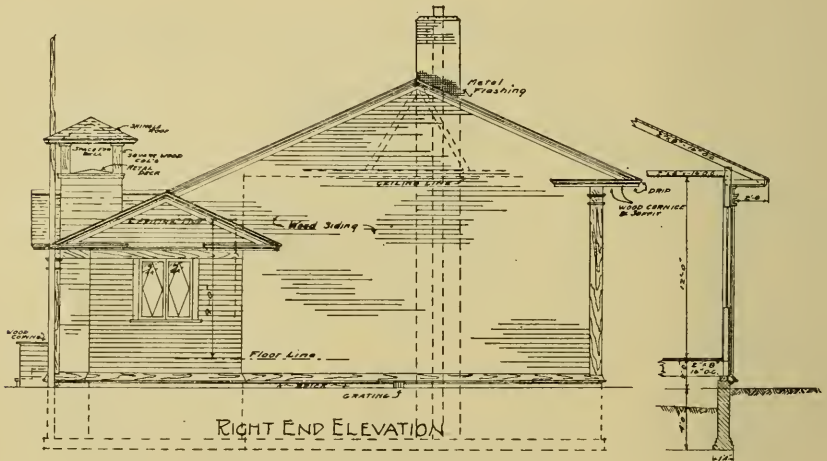
Experience has shown that objections against having the fuel room connected with the building are groundless. All who have tried it say it is a great improvement.

THE SCHOOLROOM.

The schoolroom is 23 by 31 feet and the ceiling is 13 feet high. It will seat comfortably 45 pupils. The floor plan shows 30 desks and 5 backs, seating 30 pupils. Two more rows may be placed in the rear and one in front, making 45 desks. Every door is within plain view of the teacher, as is the playground at the rear of the building. The house may be built larger and improve its appearance.

TINTING THE WALLS.

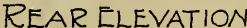
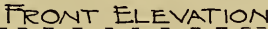
The walls of a schoolroom should be tinted so as to afford the children the best light and in such colors as are most restful to the eyes. To tint all the surfaces, ceiling and walls the same color is always bad, especially



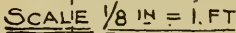
if the color is dark. It makes the room look like a cave. Paper should not be placed on new walls. It will not stay on and is insanitary. Alabastine or a similar preparation is the best. It is inexpensive, any one can apply it and it will stay. The proper colors can be easily obtained. Two schemes are recommended, one in green and one in tan. The wainscoting should be a chocolate brown, the walls up to the border should be a light green, no darker than a robin's egg. The border and ceiling should be a cream color.

When tan is the prevailing color the wainscoting should be brown, the walls tan, the border and ceiling a light cream. If paint is used, it should have no gloss.

The colors recommended give the room a homelike, cheerful look, and make the light more favorable than any other colors. A dark ceiling greatly darkens the room. It absorbs the light instead of spreading it over the room. When a room is ceiled with hard pine the walls may be left the natural color but the ceiling should be painted a light yellow.

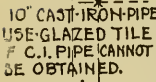


This side should be north, east or west if possible.



Floor Plan—Without Basement.

Note.—When indoor toilets are to be installed in the coat rooms the part marked **closet shelves** should be extended out in line with the coat room walls.



Plan for a Basement.

Chimney Cap—

Stone or concrete.

Ventilating Grates in Foundation—

5 vents, 6"x9", cast iron

Flue Lining—

10" iron pipe or sewer tile, 28' high.

Woodwork—

Girders, 6 pcs., 6"x10"x12'.	Wall plates, 4 pcs., 2"4"x18'.
Sills, 6 pcs., 2"x8"x20'.	Wall plates, 4 pcs., 2"x4"x12'.
Sills, 8 pcs., 2"x8"x16'.	Ceiling joists, 25 pcs., 2"x6"x24'.
Floor joists, 59 pcs., 2"x8"x12'.	Ceiling joists, 34 pcs., 2"x4"x10'.
Floor joists, 13 pcs., 2"x8"x10'.	Rafters, 52 pcs., 2"x8"x16'.
Studs, 108 pcs., 2"x4"x14'.	Rafters, 26 pcs., 2"x4"x14'.
Wall plates, 8 pcs., 2"4"x16'.	Rafters, 5 pcs., 2"x4"x16'.

For cripples, 40 studs, 2"x4"x12'.
 Roof sheathing, 1,100 sq. ft. 1"x4".
 Roof braces, 26 boards, 1"x4"x16'.
 Roof shingles 13,000.
 Boxing, 2,040'x1".
 Siding, 2,500'x4".
 Flooring, 1,450 ft., 1"x4".
 Cornice Plancier, 225 ft., 1"x4" wainscoting.
 Wainscoting, 860 sq. ft.
 Lining for fuel room, 250 sq. ft. flooring.
 Cornice crown mould, 234 ft. 4" wd.
 Finish lumber, base, corner-boards, frieze, ridge-boards and steps, 655 ft.

Doors in Frames—

Outside double doors, 4'8"x7'x1 $\frac{3}{4}$ " G. P. Tr. 16", 5 lights.
 Inside double doors, 4'8"x7'x1 $\frac{3}{4}$ " G. P. Tr. 16", 5 lights.
 4 doors, 2'8"x7'x1 $\frac{3}{4}$ ".
 1 door, 2'6"x7'x1 $\frac{3}{8}$ ".
 1 door, 1'6"x7'x1 $\frac{3}{8}$ ".
 Outside fuel door, 2'8"x7'x1 $\frac{3}{4}$ ".

Windows and frames—

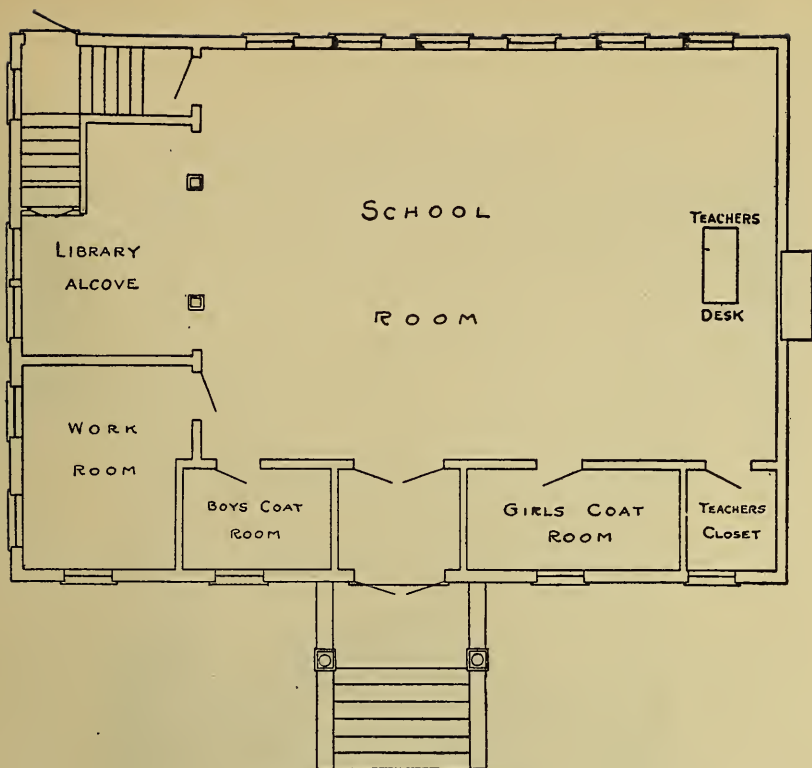
Group of 6 windows, box frames, 2 L. 38"x38".
 2 windows, plain frames, 1 L. 32"x36".
 2 windows, plain frames, double folding sash, 1 L. 16"x44" hinged outside.
 2 windows, plain frames, single sash hinged outside, 1 L. 10"x44".
 1 flag pole 30' long, 5"x5" and 3"x3", W. I. holder.
 Lath, 5,100.

Plastering—

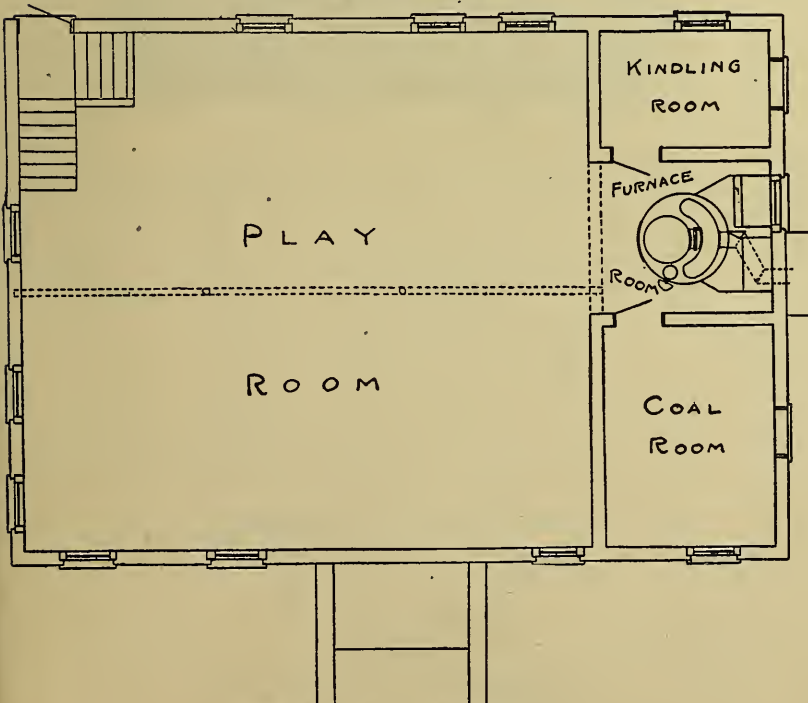
9 bbl. lime.
 6 yds. sand.
 15 bu. hair.
 Sheet metal, hardware, painting, desks, paper hanging, decorating walls and ceiling, heater, ventilating register, fresh air duct, blackboards, walks.



A good plan which provides all the essentials for a one-room school or two teachers may be employed, one hearing classes in "work room." All the children are seated in the schoolroom.



Floor Plan, Constant School.

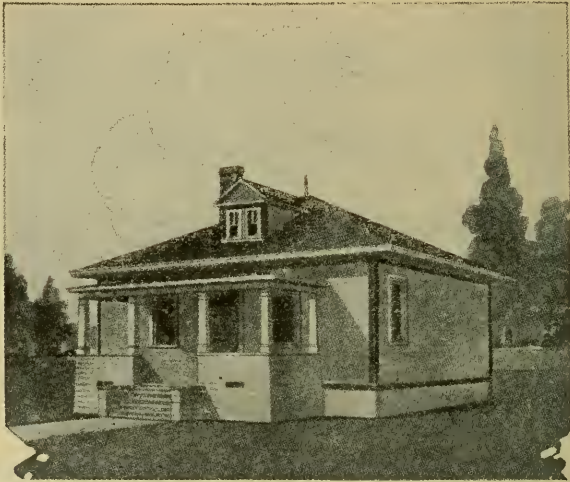


Basement Plan, Constant School,

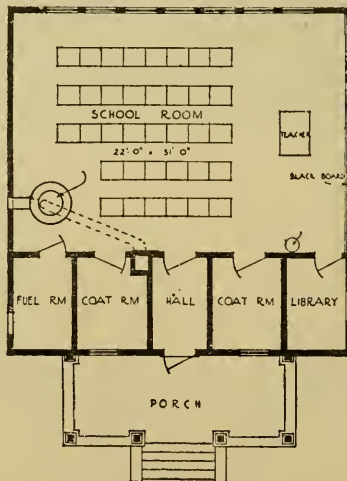
A LESS EXPENSIVE HOUSE.

In some districts the assessed value of the property is so low that it will be impossible to raise the money by taxation to build so expensive a house as the Illinois district school. For such, a less expensive plan is suggested: The foundation is 32 by 32 feet. The schoolroom is 22 by 31 feet. If the fuel room is not desired it can be used as a coat room and the library room can be made to include the present room and the coat room beside it.

It provides all the conveniences of the more expensive house, but is smaller and plain in appearance. The cost of building will be from \$1,200 to \$1,800, depending upon the price of material and labor in different localities.



A Less Expensive House—Perspective.



A Less Expensive House—Floor Plan.

REPAIRING AND IMPROVING OLD BUILDINGS.

Most of the country schoolhouses built forty years ago are usually of the type shown in figure 1. The timbers are still sound and districts do not like to discard the old and build new houses. A house of this type can be repaired and improved at small cost. The house then will be good for a generation.

Figure 1 shows the schoolhouse that is found in many places. It has no vestibule nor coat rooms. There are windows on both sides and often at the ends, sometimes the windows are on four sides, making it impossible for a child to sit without facing the light. This is useless and injurious to the children. The desks are double.

The improvement suggested does away with the platform and the double desks. It provides a vestibule and two coat rooms in front, a fuel room and library at the side. The lighting is from the left and the rear and is perfect.

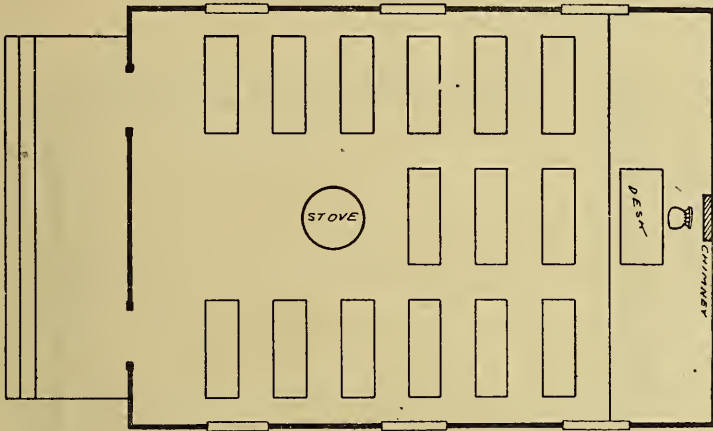


Fig. 1.

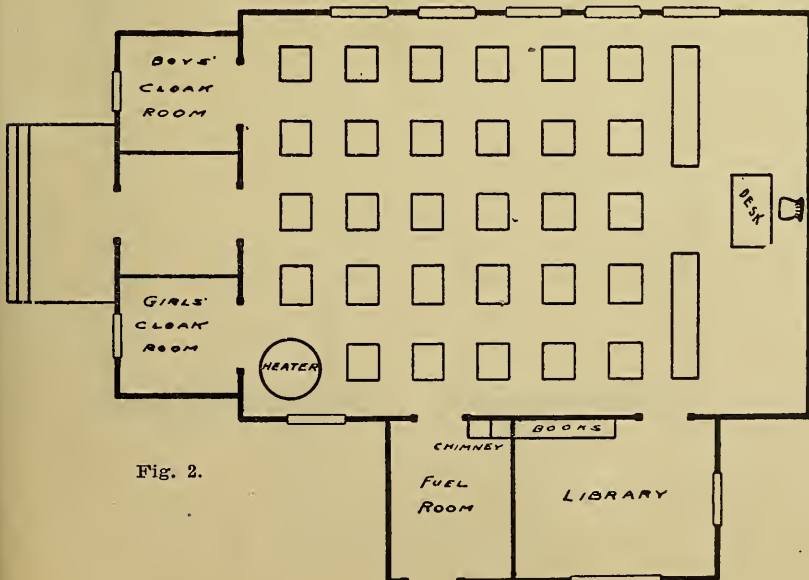
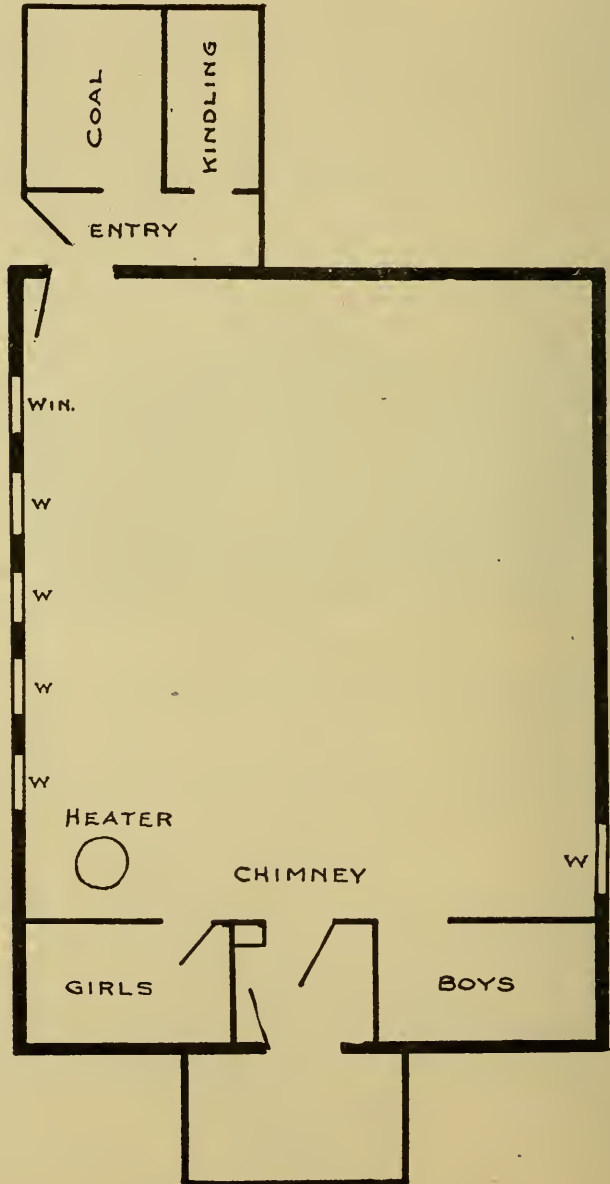


Fig. 2.

The library and fuel room can be placed similar to that in the cheaper plan of the Illinois district school and the lighting arranged in the same way.

In repairing old buildings a good foundation should be provided. The ventilators in the walls should be closed in winter. It will save a ton of coal and add greatly to the comfort of the children.



INEXPENSIVE CLOAKROOMS, ENTRY, AND FUEL HOUSE.

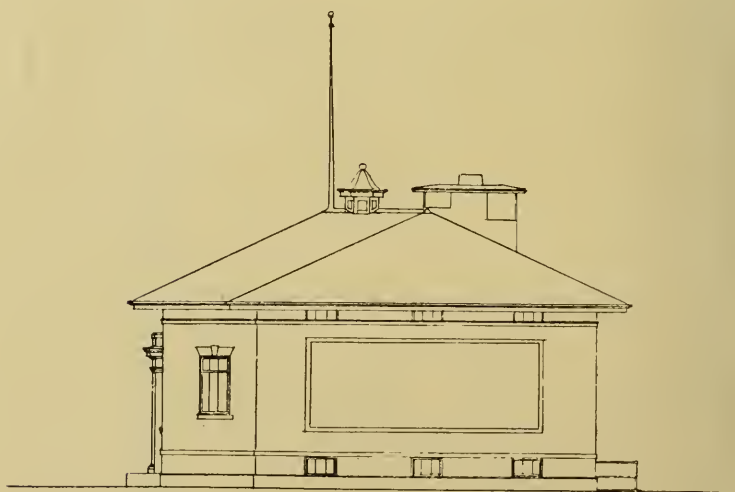
Many country schoolhouses consist of four walls only, the door opens directly into the schoolroom and the children's wraps are hung on the wall.

Such a house can be made fairly comfortable by erecting matched ceiling partitions as shown above. The walls enclosing the entry should extend to the ceiling, but the cloakroom walls should extend upward only $6\frac{1}{2}$ feet. They should be raised 6 inches from the floor so as to allow the air to circulate freely. The double chimney should be placed in the entry and the heater in one of the corners or near the cloakroom.

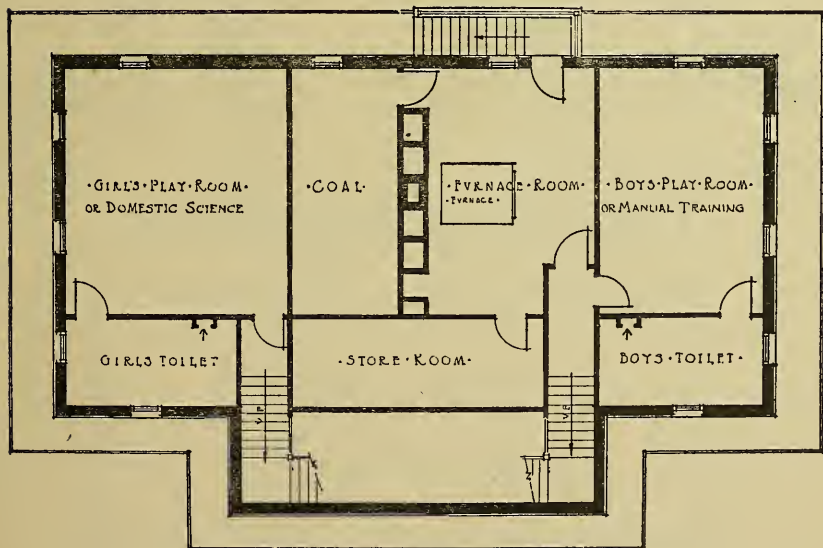
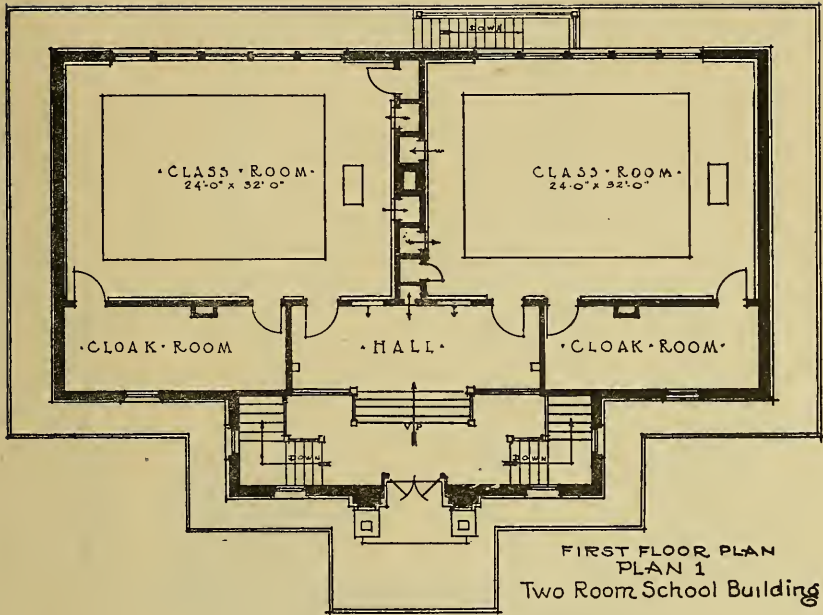
SUGGESTIVE PLANS FOR GRADED SCHOOLHOUSES.

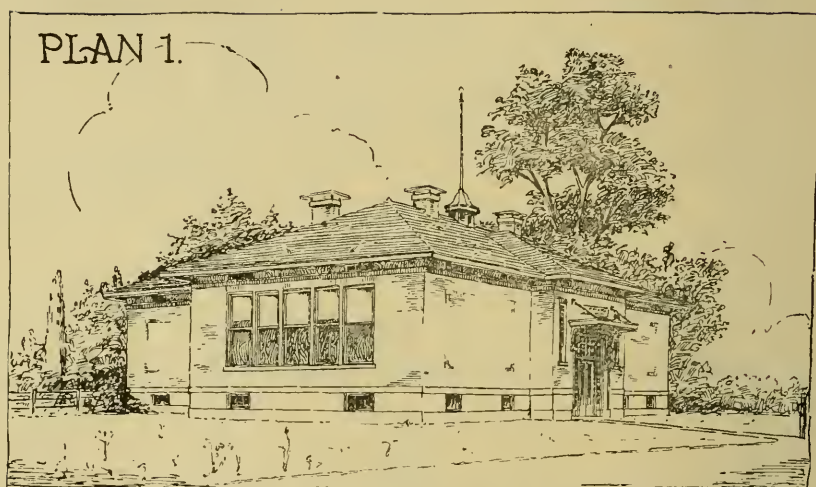


FRONT ELEVATION
PLAN 1
Two Room School Building

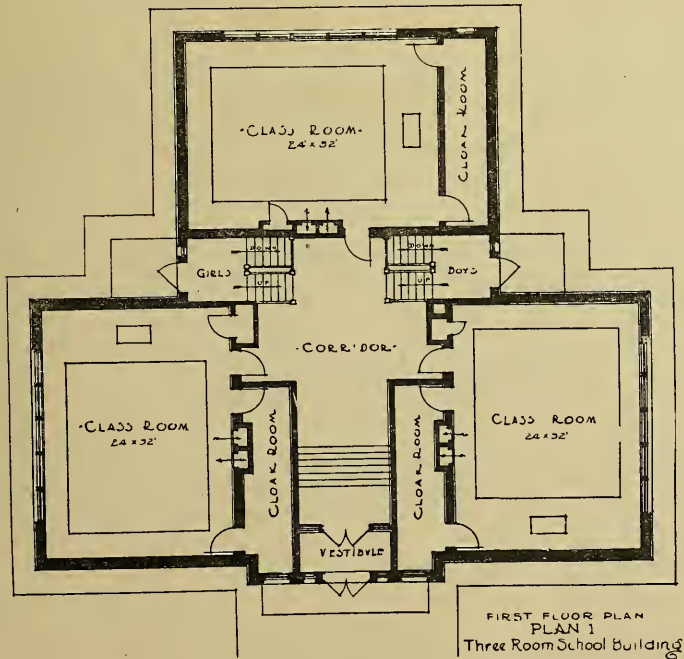
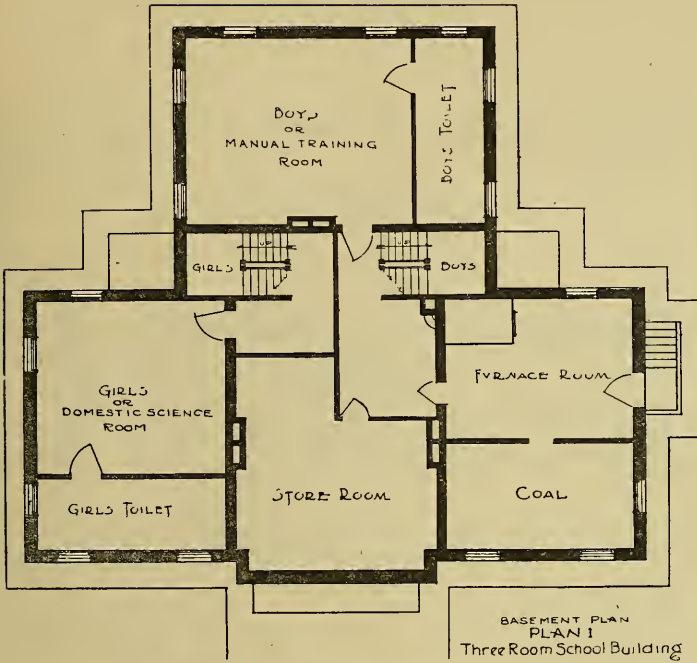


SIDE ELEVATION
PLAN 1
Two Room School Building



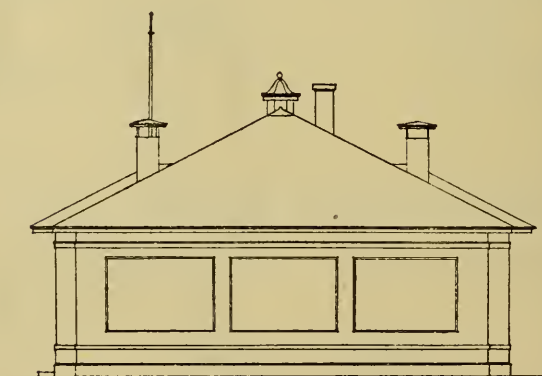


Three-Room Schoolhouses



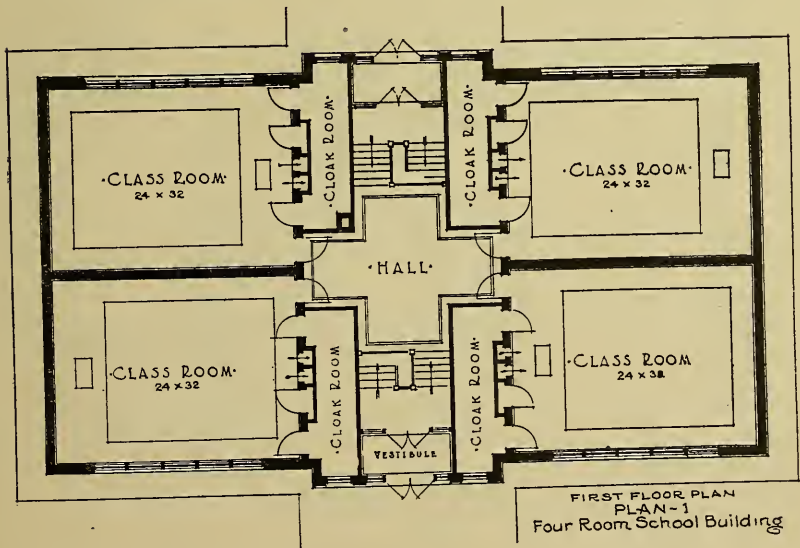
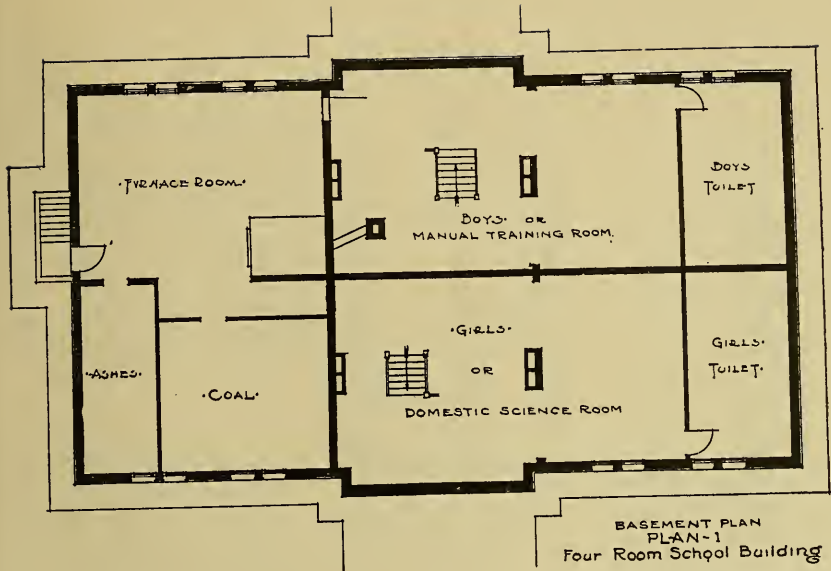


FRONT ELEVATION
PLAN-1
Four Room School Building



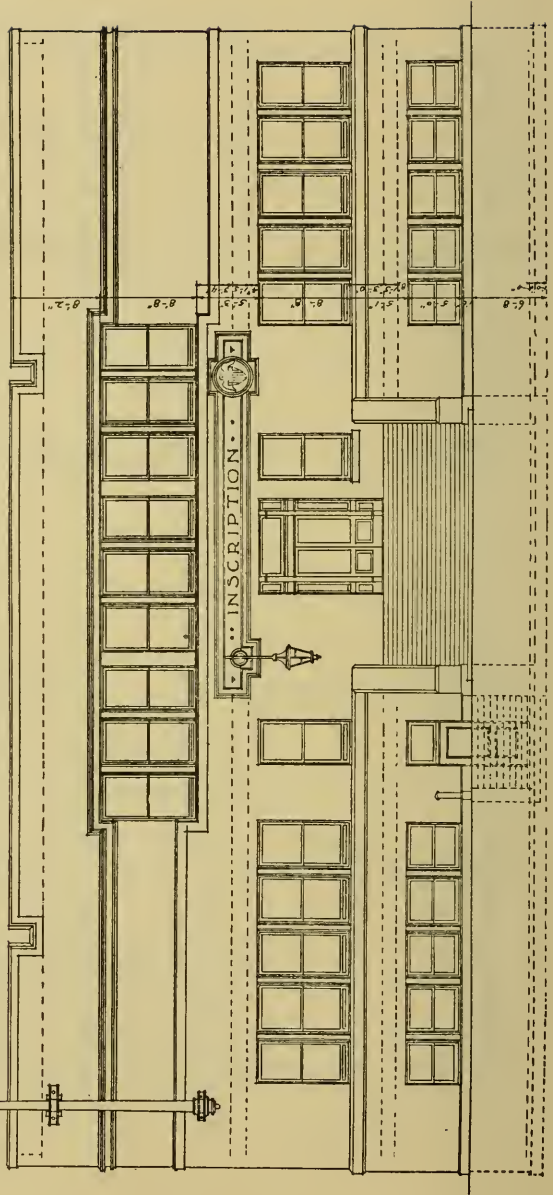
SIDE ELEVATION
PLAN-1
Four Room School Building

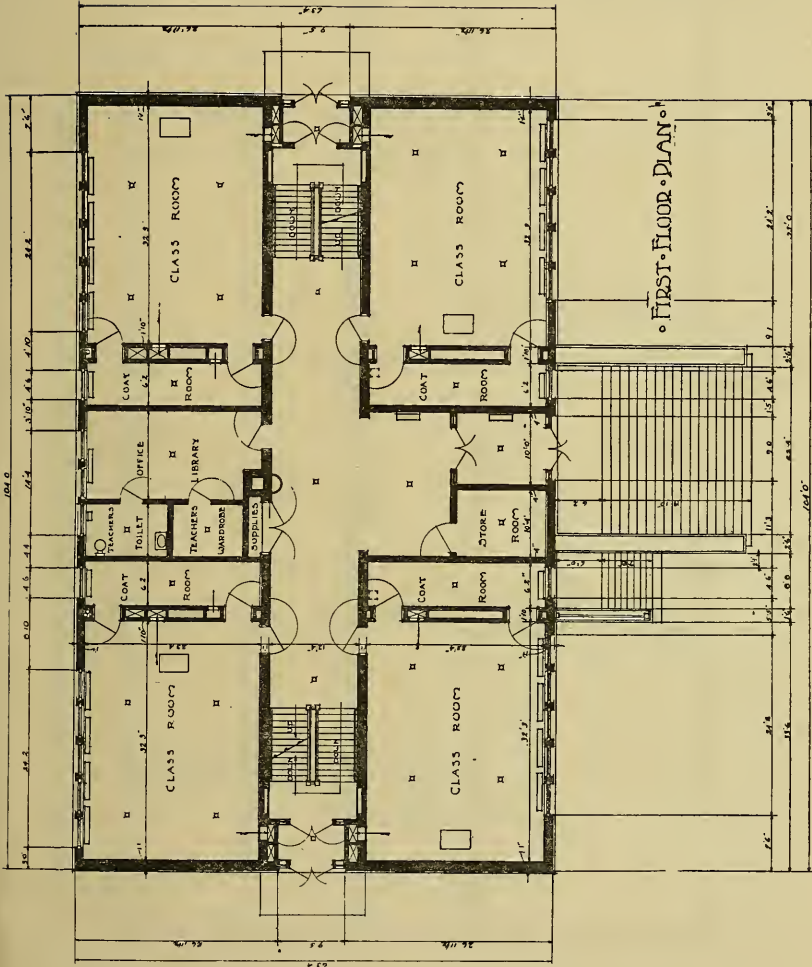
SIDE ELEVATION

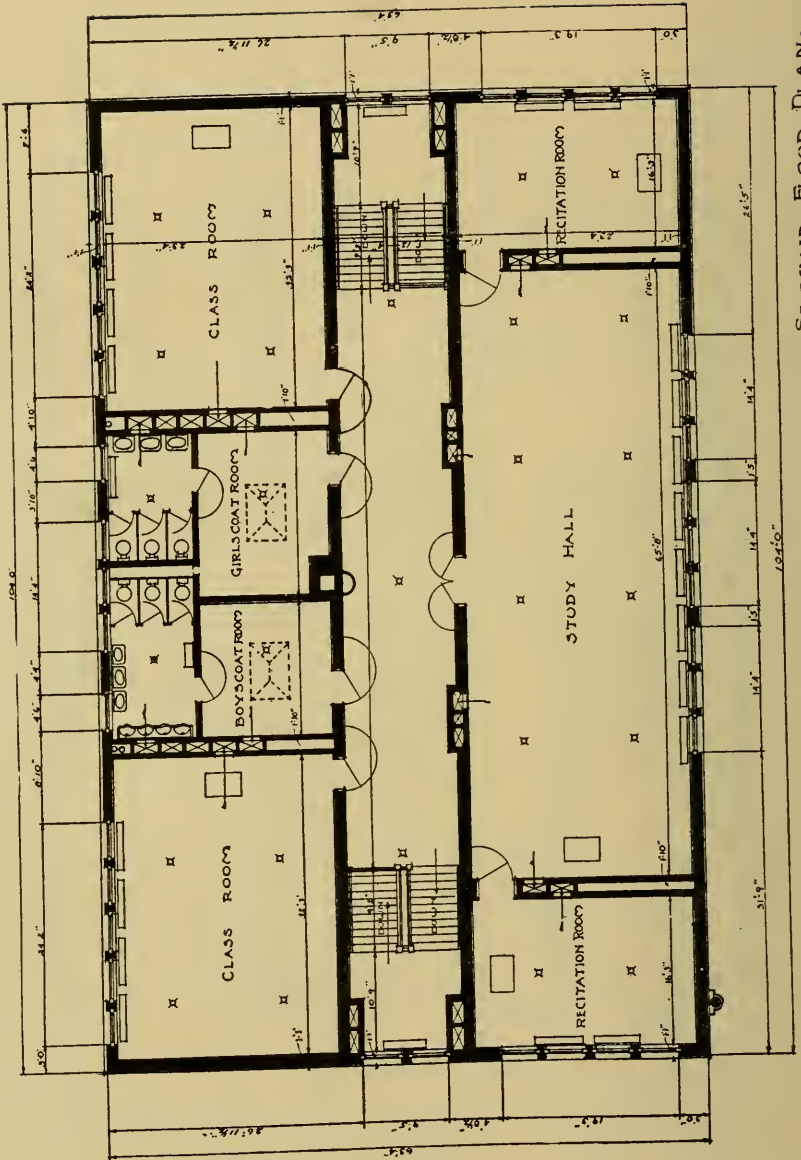


Graded and High School Building

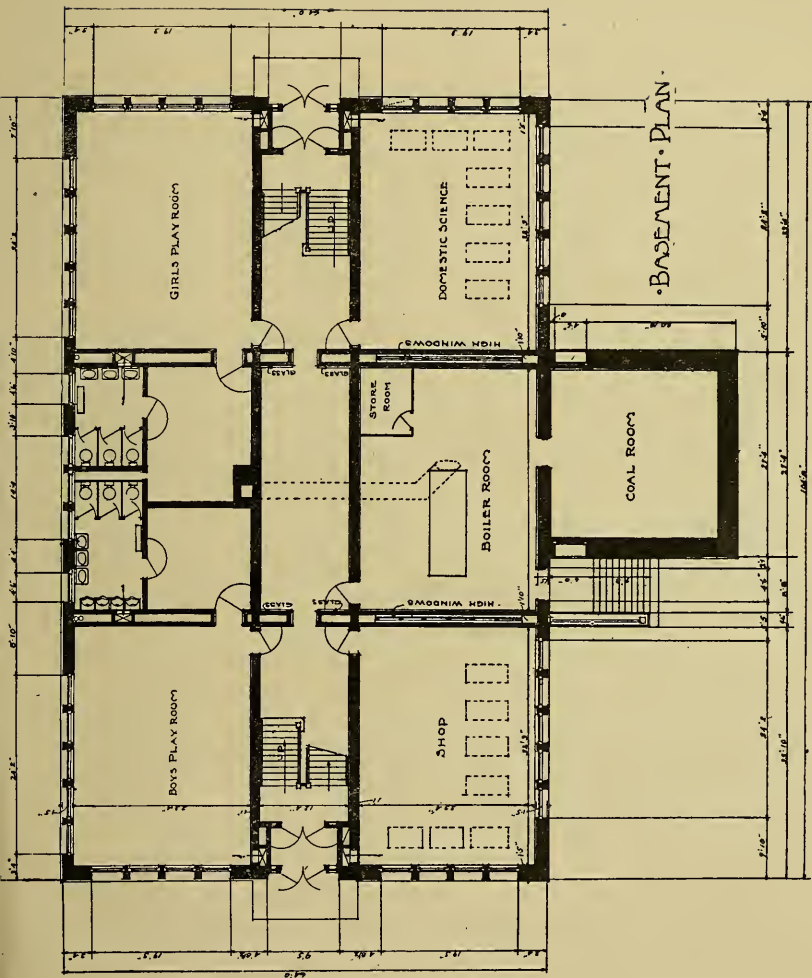
• FRONT • ELEVATION •







• SECOND FLOOR PLAN •



SECTION IV. CONSOLIDATED SCHOOLS.

THE LAW.

COMMUNITY CONSOLIDATED SCHOOL DISTRICT.

§ 84a. Subject to the conditions of Sections 84b, 84c, 84d, 84e, 84f and 84g of this Act; any compact and contiguous territory bounded by school district lines may be organized into a community consolidated school district.

§ 84b. Upon presentation of a petition as hereinafter provided, the proper county superintendent of schools shall submit to the voters of any compact and contiguous territory bounded by school district lines the question of organizing such territory into a community consolidated school district at an election to be called by him for that purpose. Such election shall be held not less than thirty days nor more than sixty days after the filing of the petition.

§ 84c. The petition herein provided for shall be signed by at least twenty per cent of the legal voters of such territory, but in no case shall more than two hundred signatures be necessary to make valid any petition. The petition shall pray that the question of erecting such territory into a community consolidated school district, shall be submitted to the voters of such territory, and shall be filed with the county superintendent of schools in the county in which the larger portion of territory is situated, not less than thirty days prior to the submission of such question to the voters. Such petition shall also describe with particularity the territory proposed to be organized into a community consolidated school district. Notices of such election shall be posted in at least ten of the most public places in such territory for at least ten days prior to the date fixed for the holding of such election, and shall be in substantially the following form:

NOTICE OF ELECTION.

Notice is hereby given that on.....the.....day of.....

A. D....., an election will be held at.....for the purpose of voting "for" or "against" the proposition to create a community consolidated school district out of the following described territory, to-wit: (Here describe the territory.)

The polls will be opened at.....o'clock....m., and be closed at.....o'clock.....m.

.....
County Superintendent of Schools.

The ballots for use in such election shall be in substantially the following form:

For the proposition to create a community consolidated school district	
Against the proposition to create a community consolidated school district	

The county superintendent of schools calling the election shall furnish all ballots, ballot boxes, tally sheets, poll books, forms and blanks necessary for the proper holding of the election.

§ 84d. Such election shall be held at such polling place or places as shall be designated by the county superintendent of schools calling the election, and to the extent that the same are applicable, shall be governed by the laws governing the election of school directors. Such county superintendent of schools shall appoint necessary judges and clerks of election. If any judge or clerk of election shall fail to attend or refuse to qualify, the legal voters present shall choose from their number some one to act in his stead. Returns of the election shall be made to the county superintendent of schools. The polls shall be open for at least three consecutive hours.

§ 84e. If a majority of the legal voters voting at such election on the question so submitted, shall vote in favor thereof, the territory described in the petition shall be deemed duly organized as a community consolidated school district and shall have the same powers and duties as other school districts under the laws of this State. The county superintendent of schools calling the election shall file or cause to be filed with the county clerk of each county in which any part of the territory so organized as a community consolidated school district is located, a true and correct map of such community consolidated school district.

§ 84f. Community consolidated school districts shall be governed by boards of education composed of a president and six members, who shall be elected for the same terms and in the same manner as boards of education in school districts having a population of not less than 1,000 nor more than 100,000 inhabitants. Boards of education in the community consolidated school districts shall perform the same duties and exercise the same powers as are imposed and conferred upon boards of education in school districts having a population of not less than 1,000 nor more than 100,000 inhabitants, and shall also exercise any and all powers granted to boards of school directors under the provisions of Section 121a of this Act.

Immediately after the formation of any community consolidated school district the county superintendent of schools of the county in which the greater portion of such district is situate shall call an election for the purpose of electing a board of education for such district. Such election shall be held not less than thirty days after the organization of such district.

Petitions for nomination as candidates for president and members of the first board of education shall be filed with the county superintendent of schools calling the election and in all other respects shall conform to the requirements contained in section 126a of this Act. Of the six members of the first board of education two members shall be elected each for a term of one year, two members each for a term of two years, and two members each for a term of three years from the third Saturday in April next preceding their election. Annually thereafter on the third Saturday of April two members of such board shall be elected each for a term of three years. The president of the first board of education shall serve for one year from the third Saturday in April next preceding his election.

The election for the first board of education shall be held at such polling place or places as shall be designated by the county superintendent of schools calling the election. Such county superintendent of schools shall appoint necessary judges and clerks of election and shall furnish all ballots, ballot boxes, tally sheets, poll books, forms and blanks necessary for the proper holding of the election. Except as herein otherwise provided such election shall be governed by the provisions of sections 126 and 126a of this Act. Returns of the election shall be made to the county superintendent of schools calling the elections.

ANOTHER WAY TO EFFECT CONSOLIDATION.

Sec. 121a. (a) Any two or more school districts may be consolidated and all the pupils of the school districts so consolidated may attend the consolidated school in accordance with the terms hereof.

(b) When it is proposed to consolidate two or more school districts, a joint meeting of the directors of the schools it is proposed to consolidate shall be called by not less than two directors, representing each district, by giving not less than five days' notice by mail of the time and place of such meeting to each of the directors of all the districts proposed to be consolidated. By action of the meeting so called, the question of consolidation may be submitted to the voters of each district in which a majority of the directors shall favor consolidation. The call for such election shall state the time of the election and fix the place at the school house in each district included and shall be advertised in the same manner as is or may be provided for advertising the election of directors. Such call shall also state the place or site of the proposed consolidated school.

(c) Upon such election, if in each school district the majority of the votes upon the proposition shall be in favor of the consolidation, such districts shall be consolidated according to the terms of the proposal. If in any one school district the majority shall be against the consolidation, the election shall be of no effect.

(d) Additional districts may thereafter be added to the consolidated school by a majority vote of both the consolidated districts and the districts seeking to be included therein, upon such terms and conditions as may be fixed by the consolidated district or may be mutually agreed upon.

(e) The board of directors of such consolidated school, at any time after a consolidation has been effected, shall provide free transportation for pupils residing at a distance" from such consolidated school site.

(f) Such consolidation and free transportation shall be held to be a compliance with paragraph 9 of section 114 of this Act entitling school districts to receive a share of the funds distributed in accordance with section 35 of this Act.

(g) The ballot for use in voting upon consolidation under this section shall be in substantially the following form:

For the consolidation of the schools of districts No. At	
Against the consolidation of the schools of districts No. At	

The electors shall mark their ballots with a cross in the square opposite and to the right of the proposition they favor.

(h) If two or more districts shall vote to consolidate, the directors of such district shall, within ten days after the election, meet and call an election for directors of such consolidated district. At such election there shall be elected five directors, two to serve for one year, two to serve for two years, and one to serve for three years; directors thereafter elected to serve three years.

(i) The board of directors so elected shall perform all the duties and exercise all the powers conferred upon board of school directors, in connection with consolidated school, and to all intents and purposes, such consolidated district shall be and become a single school district.

ANNEXATIONS TO COMMUNITY CONSOLIDATED SCHOOL DISTRICTS.

§ 84g. With the consent of a majority of the members of the board of education of a community consolidated school district, territory adjacent to such district, may be annexed thereto, in the manner hereinafter prescribed.

Upon presentation of a petition, signed by not less than twenty per cent of the legal voters of the territory consisting on one school district or less adjacent to a community consolidated school district, praying for the annexation of such territory to such community consolidated school district, the county superintendent of schools of the county in which the greater portion of such territory is situate, shall submit the question of annexing such territory to such community consolidated school district, to the voters of such territory, at an election to be called by him for that purpose: *Provided*, that no more than two hundred signatures shall be required to make valid any such petition.

Such election shall be called and held in accordance with the provisions of Sections 84b, 84c and 84d of this Act, so far as the same are applicable.

If a majority of the voters voting at the election on the question so submitted, shall vote in favor thereof, such adjacent territory shall be deemed a part of such community consolidated school district, and a true and correct map of the territory so annexed shall be filed by the county superintendent of schools calling the election, in the office of the county clerk of each county in which a part of such adjacent territory shall be situated.

SUGGESTIONS.

1. The proposed district must include whole school districts.
2. The petition need not contain the names of legal voters in every district included in the proposed consolidation, but it would hardly be the best plan to include a district in which no one would sign the petition.
3. Besides naming the districts to be included by number, the boundary of the proposed district should be given by metes and bounds.
4. The vote is not taken by districts nor is a majority in each district necessary. A majority in the proposed consolidated districts determines the result.
5. This is required by the county clerk that he may make the necessary changes on the tax books.
6. The only additional power conferred by Section 121a is that of transporting pupils from a distance.
7. The election for a board of education should be called by posting at least ten notices appointing judges as in the first election. He should receive the returns, and notify the persons elected of their election.
8. The county superintendent should file the petition, a copy of election notices, the returns of both elections, and make a record of all his official acts: When petition for the election was received, when and where he posted notices, where polling places were authorized, whom he appointed as judges. If some so appointed did not act, who were appointed by the voters, record the results of elections, and file poll books, and when the persons elected as members of the board were notified of their election. This is necessary to show the legality of all acts in forming the district, should the matter be taken into the courts.
9. This section provides another way to consolidate school districts. In this no responsibilities are placed upon the county superintendent.
10. When consolidations are effected by sections 84a to 84f, this duty also devolves upon the board of education as specified in paragraph 1 in section 84f.
11. The board of education must decide what shall be considered "at a distance" in its district.

Schools.

Information about consolidated schools.	Seward, Winnebago county.	Bureau, Bureau county.	Rollo, DeKalb county.	Benj. F. Funk, McLean county.	Wasco, Kane county.	Kishwaukee, Winnebago county.	Victoria, Knox county.	New Milford, Winnebago county.	Harlem, Winnebago county.	John Sweeney, Putnam county.	Hindsboro, Douglas county.	Senachwine, Putnam county.	Ily Lake, Kane county.
QUESTIONS													
1. No. of districts consolidated	3	6	6	2	3	3	3	3	4	3	3	4	3
2. Square miles	12	28½	27	16½	18	12	11	4	18	20	18	21	12
3. Assessed valuation	373,830	489,078	589,910	440,319	327,350	214,000	233,227	280,000	991,977	546,236	450,640	438,398	220,000
4. Cost of house	7,000	50,000	35,000	9,000	9,000	9,000	.....	8,000	63,700	40,000	11,000	14,000	25,000
5. Annual tax levy	4.00	11.00	8.968	4.200	4.500	5.520	4.536	6.380	24,000	6,000	6,500	6,320	6,600
6. Tax rate	1.07	2.20	2.40	.93	1.09	2.01	1.59	1.71	2.00	1.11	1.50	1.45	3.00
7. Annual tax levy before	1,200	3,500	2,250	1,175	.....	1,900	2,625	1,530	1,600	1,950	2,747	1,960	2,000
8. Teachers now	5	7	9	3	4	5	5	4	13	7	7	5	3
9. Teachers before	3	6	7	2	3	3	4	3	4	4	3	4	3
10. Enrollment now	91	133	125	72	75	82	130	90	233	120	180	92	70
11. Enrollment before	89	110	90	46	55	51	63	63	78	60	100	54	65
12. Enrollment in grades	71	106	74	56	56	69	98	73	244	80	130	60	62
13. Enrollment in high school	19	27	43	16	11	13	32	18	49	40	60	26	8
14. No. studying agriculture	6	10	17	3	15	.....	.....	8	11	15	.....	4	.....
15. Number studying manual training	6	.....	18	.....	.....	4	.....	.....	56	.....	.....	8	.....
16. Number studying home economics	5	15	13	.....	.....	4	.....	.....	56	12	.....	.....	.....
17. Aid from vocational fund	No	Yes	Yes	No	No	No	No	No	No	Yes	No	No	No
18. Public conveyance	No	No	No	Yes	No	No	No	No	No	No	No	No	No
19. No. of wagons	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
20. Transportation cost	.....	.....	.....	725	.....	.....	.....	.....	.....	.....	.....	.....	.....
21. Longest time on road	.....	.....	.....	1:10	.....	.....	.....	.....	.....	.....	.....	.....	.....
22. Is it community high school?	No	Yes	Yes	No	No	No	No	No	No	Yes	No	No	No
23. Years of high school course	3	4	4	2	2	3	3	3	4	4	4	4	2
24. Months in year	9	9	10	8½	9	3	8½	9	9	9	9	9	9

REPLIES TO THE FOLLOWING QUESTIONS.

25. In what way do adults of the community profit by the school?
26. In what particular does the school meet the needs of the children and young people in the community in a superior way?
27. What complaints are made?
28. What features give the most universal satisfaction?

SEWARD CONSOLIDATED SCHOOL.

25. (a) Gives an increased value to the farm lands in the district.
(b) It gives the child a good education with out leaving home to attend the city school.
26. It brings a greater number of children together than in a one-



SEWARD CONSOLIDATED SCHOOL.

room rural school, thus making larger classes, and the larger the class the greater the interest and spirit of competition among the children.

27. No complaint.

28. The Agriculture and Home Economic Courses are the features that give the most universal satisfaction.

(Signed) IRVIN J. ROWE,
Principal.

Seward, Ills.

BUREAU TOWNSHIP CONSOLIDATED SCHOOL.

25. Adults use school as social center, and place for community gatherings. Ladies of Township have Club which meets at school.

26. Children have advantages of a much better school, also giving the teacher more time to devote to the needs of the individual pupil.

Young people and old ones as well have a place for wholesome reaction and entertainment in the form of athletics, lecture courses and programs of all sorts.

27. No complaint with the majority. Some protest to the high tax.

28. The feature which gives the most universal satisfaction is the fact that the rural child has the same educational opportunities with this system as does the city child.

(Signed) V. C. RAMSEYER,
Principal.

Princeton, Ills.

ROLLO CONSOLIDATED SCHOOL.

25. School foster the community spirit. Adults use building and equipment for social affairs, grange, short course, etc.

26. School gives the children better and more schooling, encourages college education, raises the standards of living.

27. No objections from any one.

28. Community spirit created around the school. Better school advantages. Vocational education a factor in the lives of boys and girls. Big school budget. More money.

(Signed) J. R. McENTEE,

Rollo, Ills.

BENJAMIN FUNK CONSOLIDATED SCHOOL.

25. Without question the school is the social center of the community. Regular club meetings are held monthly; the women hold the Home Bureau meetings here; socials, etc., are held frequently.

26. Patrons take a greater interest in the school because of the better building, better equipment and better educational advantages, together with the better social condition mentioned above.

27. The school wagon is too slow. It will be replaced by a truck next term if the proposed road improvements are made.

28. Mention is most often made of the advantages derived from the teacherage. It is the home for the teachers and janitor, a refuge for students living at a distance and are not served by the school wagon, a meeting place of committees, school board, farmers' business meetings, the center of social gatherings of the older students and the young people of the community, etc.

(Signed) WALTER M. STACEY,
Principal.

Shirley, Ills.

KISHWAUKEE CONSOLIDATED SCHOOL.

25. Our school is used by the adults of the community as a social center; for example, all of the church suppers and functions of that kind are held in the school house. Our library is also used extensively by the adults.

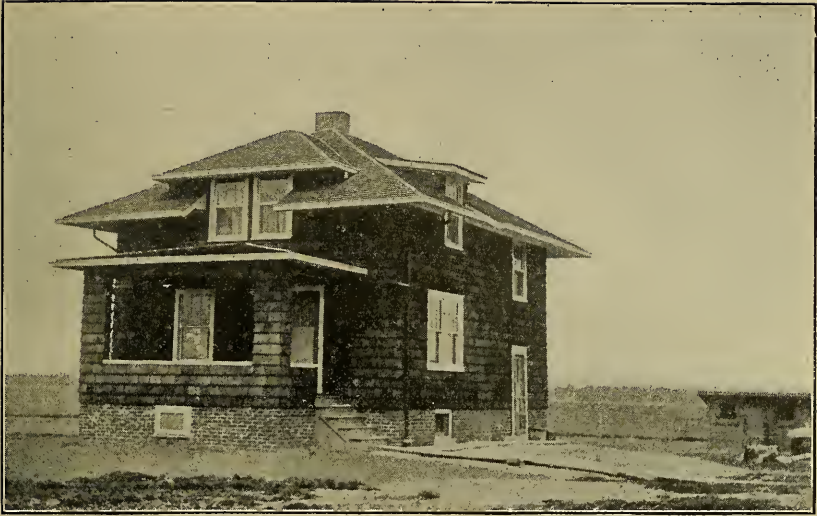
26. The consolidated school enables the children to receive better instruction, by having more teachers and better equipment. It also makes possible a great many social events such as basket ball, parties and plays. The young people and the adults use the school as a community center.

27. There are no serious complaints. A few find fault with the taxes, and the fact that some of the children have quite a ways to come.

28. The feature that gives the most universal satisfaction to the community as a whole, is the function of the school as a social center.

(Signed) L. F. McNURLEN,

Stillman Valley, Ills.



TEACHERS' HOUSE.
Benj. F. Funk Consolidated School.



SCHOOL AND TEACHERS' HOME.
Benj. F. Funk Consolidated School.

VICTORIA CONSOLIDATED SCHOOL.

Here is the statement you asked for some days ago concerning the Victoria Consolidated school. This is a school that will amount to a great deal in the comparatively near future, but it has not done all that it should have done since the consolidation.

Of the three districts united, one was practically a unit in opposition to the plan. This was, however, due to an ill feeling in that district toward the village of Victoria because of telephone and road difficulties. The people of the district fought it all the way through the Supreme Court. The directors of the Consolidated district, with this in mind, have moved rather slowly and, I think, are wise in doing so. A petition is circulating now for the proposed uniting of another district with the present consolidation.

The plan is this summer to erect a new building that will serve as a real community building. As yet the community has not benefited particularly through the consolidation.

The needs of the children are better met than under the old plan in this: formerly there were two teachers in the Victoria School and two outside, making it impossible to do any real satisfactory High school work. Under the new plan there are three teachers doing grade work and two doing High school work. The High school has provisional recognition from the State Department and receives \$1,500 or \$1,800 a year as tuition.

The location of the village of Victoria, eight or twelve miles from the towns nearest it, makes it certain that this will be an important school some day.

Very sincerely yours,

W. F. BOYES,
County Superintendent.

Victoria, Ills.

NEW MILFORD CONSOLIDATED SCHOOL.

The conditions now existing in this consolidated district are practically the same as they were given in the last pamphlet sent out on consolidated schools. Just now the district is working under a great burden which has necessitated some changes in the system. In 1917 an army cantonment was built near the district and gradually extended its territory until now over one-half of the consolidated district has been bought by the United States Government. There seems to be no law requiring the Government to share the indebtedness of the part bought and as a result the payment of the entire bond issue has been thrown upon the remaining part of the district. This has made a cut in expenses necessary and the high school course has been cut to a three year recognized instead of a four year as was the case before.

The taking away of the advantages of a four year high school in this community after once having had them has brought the people to realize more fully than ever before just what consolidation means to the small country community. Efforts are being made now to bring more outlying districts into the consolidation and thus to make it possible to build up to a four year recognized high school again. This will no doubt be accomplished at no far distant date and the citizens of this community look forward to the realization of that aim with real interest.

Trusting that the enclosed material may reach you in time for publication, I remain,

Very sincerely,

J. N. DONGES,
Principal.

Davis Junction, Ills. R. F. D. No. 1.

HARLEM CONSOLIDATED SCHOOL.

The city has encroached upon the Harlem Consolidated district. The southern end of the district is now known as Love's Park. A year ago last

summer a comfortable two-room building for temporary use was built in Love's Park. I believe about 80 children in first and second grades are cared for there. The district voted \$35,000 bonds last fall for the purpose of putting up a fine grade building to replace the temporary building. Work will begin this spring.

Last summer the roof of the old building was raised and \$20,000 spent in adding the second story.

This is a case where a consolidated school is being rapidly urbanized. In 1908 when the consolidation was effected, the assessed valuation of the district was \$201,038. It is now \$991,977. In 1916, the enrollment was 100. It is now 293. Another building had to be erected for the small children in one end of the district. The school, however, continues to be the chief community interest and maintains the progressive spirit which led to the consolidation. The district is $4\frac{1}{2}$ miles long and three miles wide. A trolley line runs the length of it and through the populous region. The children get cheap transportation but have to pay it themselves.

25. The adults of our consolidated community benefit in many ways because of the presence of the consolidated school. They have community gatherings of all kinds most every week, including Grange, Aid Societies, Parent-Teachers Associations, etc. Community dinners are often served, and community dances are popular. The Union Sunday School meets here on Sundays. Community Fairs are held annually. Lectures and entertainments presented by local and outside people, help make life in this community one of great pleasure.

26. Our students have the great advantage in the grades of having one teacher for one grade, 40 minute supervised study periods, and 30 minute recitations in the higher grades, the use of an extensive library of good books, manual arts, home economics, agriculture, physical training, and special work in drawing and music. The high school students have modern chemistry and physics laboratories, manual arts, and home economics equipment. Socially and athletically, the school is well organized with a band of 27 pieces, a 9 piece orchestra (under hired director), a Home Economics Club, Girls' Glee Club, a Piano Club, boys' and girls' athletic teams, debating, spelling, and literary teams. Entertainments, basketball games, community dances, draw all the young people of the community to the school in the evenings, thus making of the school a fine wholesome social center as compared with others which are not, so wholesome and which would thrive if not for the presence of the school. An excellent course of study is offered high school students throughout the four years. As testimony of the fact that the people in the community love the school and its work is the information to you that the people voted almost unanimously to bond the district to the limit to pay for the raising of the roof of slate on the original building and the erection of another story (making three stories including basement) providing three new class rooms and a fine auditorium and gymnasium, at a cost of \$22,000 (making present value of building \$40,000), and to build another graded school in the south end and more populous part of the district, at an approximate cost of \$45,000 to \$55,000.

27. I know of no important complaint registered, unless if at any time the people believe the efficiency of the school along one certain line could be increased. This, however, is not complaint but constructive criticism.

28. The excellent social work of the school, and the better educational advantages offered stand out prominently as features giving most universal satisfaction.

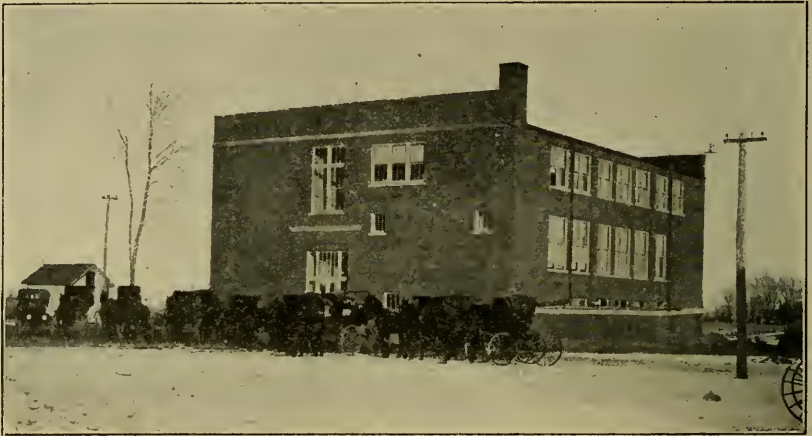
Yours very truly,

IRVING F. PEARSON.

Rockford. R. R. 9.

THE BUREAU TOWNSHIP SCHOOLS, PRINCETON, BUREAU CO.

The Bureau Township Schools are situated in the rural section nine miles northwest of Princeton, and six miles northeast of Wyand, which is the nearest town. The site of the building is in the very center of Bureau Township, which contains 36 square miles of the most fertile farming land of Illinois. The school is controlled by two Boards. The Consolidated Board consists of six districts containing about 18,000 acres, while the High School district embraces all of this territory with one additional district and two fractional districts. The school site and building are owned by the Consolidated Board, who in turn rent the portion of the



Side and rear view. Ready to start home.

building used for high school purposes to the High School Board.

It is the aim of this school to meet the educational needs of the children and to establish it as a social center in the community through various gatherings, entertainments, programs, and athletic meets.

The officers are: Gilbert G. Weller, president of the H. S. Board; Joe Johnson, secretary of the H. S. Board; W. H. Johnson, president of the Consolidated Board; Albert Wilson, secretary of the Consolidated Board; V. C. Ramseyer, Superintendent of Schools.

HISTORY.

As this particular community was rather isolated from high school facilities, the people had for some time begun to see the needs of some system of centralized schools. Through the efforts of the County Superintendent, Geo. O. Smith, and several influential citizens of the township the plans for consolidation were discussed as early as 1915, but not until the spring of 1917 was anything accomplished. An election of officers for the new district was called, resulting in the election of W. H. Johnson, as the first president, Albert Wilson, as the first secretary, and Wilbur Trimble as the remaining Board member. Later the High School Board chose Gilbert G. Weller, president of their Board, and Curtis Plum, secretary.

It was seen immediately that a new building and a suitable site were a necessity, and on August 7, 1917 the proposition was submitted to the

voters who bonded themselves for the sum of \$24,000 extending over a period of twenty years. Since then the voters have seen the need and advantages of such a system, so in order to give it the proper support they have bonded themselves for about \$50,000.

Ten acres of ground for the site were donated by Mr. and Mrs. W. H. Johnson, Mr. David Young, Mr. Albert Wilson, Mr. Wilbur Trimble, and Mr. Charles A. Johnson.

Plans for the new building were drawn immediately, but because of the war and the high cost of material the contract was not let until May 4, 1918. The work on the structure was not completed until the following spring. Monday morning, April 7, 1919, work was begun in the new build-



Assembly hall, also used for study room by the high school.

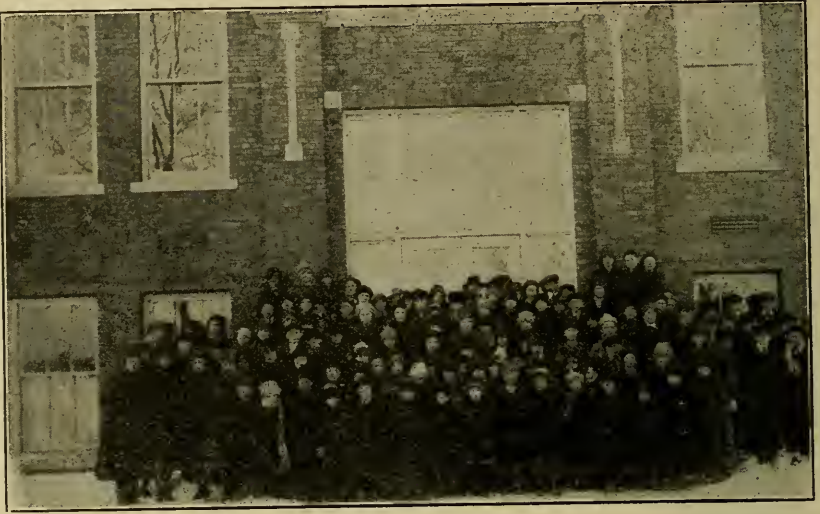
ing with a teaching force of five, and an enrollment of more than one hundred pupils.

THE SCHOOL BUILDING.

The building is beautifully located on a ten acre plot of ground situated in the very center of the township from which one may gain a panoramic view of thousands of acres in any direction.

The outside walls of the building are made of ragged finished hard brick. It measures on the ground 90 feet in length, and 68 feet in depth. The architecture throughout is of pleasing design, and no pains have been spared in making it attractive as well as practical. There are two floors, the basement and two others. The building has two entrances, the north or front entrance leads by means of a vestibule and flight of stairs to the first floor corridor. At both ends of this corridor is an entrance from the

east and west sides. From the first floor corridor one may have access to either the basement or the upper floor.



Where do you find them better? Each is grateful for this school.

The basement contains a gymnasium, directly underneath the auditorium, with toilet facilities, dressing rooms and shower baths at either



Lunch room. Children grouped in one corner.

end. On the southwest corner of the basement is the engine room containing the proper equipment for direct steam heat, and gasoline gas for

the laboratories. The space at the north end of the basement is divided into two rooms, the one of which is equipped splendidly for the depart-



Class in Agriculture.



Domestic science room.

ment of Home Economics; more than \$1,000 were spent during the past year for this department alone. The other room will ultimately be used

for manual training, but is now being used as a central lunch room by the entire school.

Occupying one-half of the space of the first floor is the spacious auditorium and high school assembly hall with a seating capacity for more than 400 people. At one end is an elevated stage 25 feet square with two dressing rooms of ample size; while at the back end of the auditorium are two class rooms with folding doors which may be opened and made a part of it. Across the corridor are two class rooms, 21 x 30, and four cloak rooms.

Passing to the upper floor one finds to the north side of the corridor two class rooms, a well lighted library; and the outer and inner offices of the Superintendent. To the south of the corridor is a raised floor with a large room in the center for the sciences, and at each end of this floor a suite of two rooms for agricultural and commercial work.

Artificial light is furnished to all parts of the building at any time of the day. The current is obtained from the Spring Valley Utilities Company about thirty miles distant. Water under pressure is available on all the



Basket ball team and instructor in gymnasium.

floors, including the basement. Bubbling drinking fountains furnish drinking water in both corridors for the children. The gravity system of ventilation allows fresh air to circulate freely through the rooms.

It was the plan of the architect to make the building as nearly fireproof as possible. Wood was sparingly used, and the stairs within and without the corridors are all solid concrete. The finish coat of the corridors, vestibule, and the stairways is a composition known as terrazzo, which is not only beautiful, but will wear indefinitely.

EQUIPMENT.

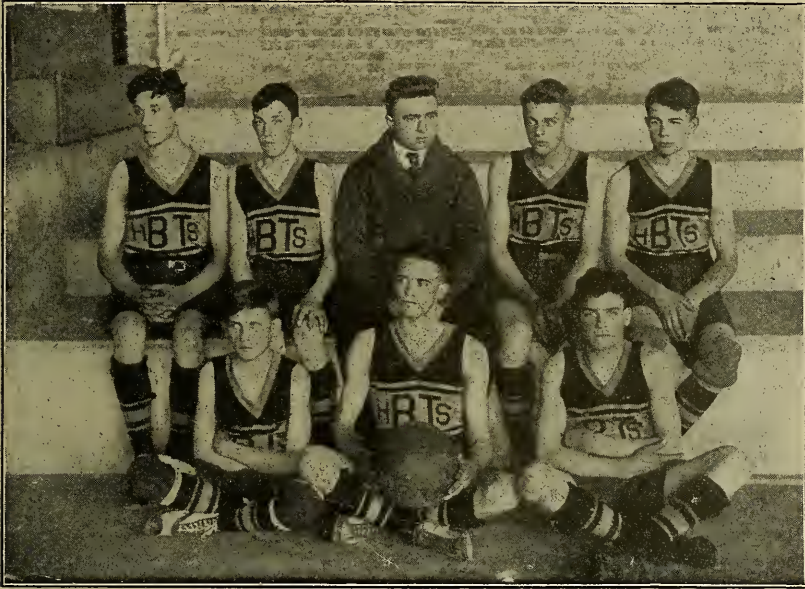
The supply of equipment is still rather meager in comparison to proposed plans. The library on the upper floor is a well lighted room equipped with a large library table, chairs and sectional bookcases. It contains about 500 indexed bound volumes, besides many pamphlets and bulletins. Several of the best literary magazines, agriculture and home economics journals, and a good daily paper are taken by the school.

This year a gasoline gas machine was installed which furnishes gas for cooking in the Home Economics laboratory, and for the Bunsen burners in the science department.

The Home Economics department is well equipped with cabinets, cupboards, tables, sinks, and an almost complete line of utensils. Eight new desks have been added, thus permitting sixteen girls to work at one time. Sewing machines have been installed also.

The department of Agriculture has ample equipment for the work offered, including miscellaneous apparatus, microscope, new laboratory tables and desks, and apparatus cases. An abundance of ground is available for experimental purposes. The departments of chemistry and physics will be developed more fully in another year.

The class rooms of the grades are well equipped with maps, pictures, and reference books. In several of the rooms the new Chicago desks have been placed.



Basket ball team and the principal, the instructor.

The assembly room and auditorium have a splendid collection of pictures, and pennants. An excellent piano is the property of the school and is used in the opening exercises and in giving entertainments. The school also owns a Victrola which is used in teaching the folk dances and games to the smaller children.

On the upper floor is the Superintendent's office, which is equipped with office desk, typewriter, typewriter desk, bookcase, office chairs, and telephone.

A large stable owned by a stock company provides a very comfortable place of twenty-four stalls in which are kept the cars, horses, and rigs.

COURSE OF STUDY.

The Superintendent of the Schools is elected by both the High School Board and the Consolidated Board, and is in charge of both the high school and the grades.

Pupils are admitted into the high school from the grades upon completion of the eighth grade in this school, or from any recognized school doing equivalent work. The work is planned in accordance with state require-

ments, thus permitting pupils to enter college upon completion of their work in high school. Sixteen units are required for graduation from the high school. A year at least of agriculture or home economics is required in order to obtain a diploma. Physical training is compulsory of all pupils, unless a certificate is furnished from a physician stating that the child's health will not permit.

The course of study follows:

First Semester.

Second Semester.

FRESHMAN YEAR.

*English 1.
*Physiology.
*Agriculture.
*Home Economics.
*Algebra 1.

*English.
*Physical Geography.
*Agriculture.
*Home Economics.
*Algebra 1.

SOPHOMORE YEAR.

*English 2.
*Latin 1.
*Plane Geometry.
Agriculture.
Home Economics.
Manual Training.
European History, Part 1.
Zoology.

*English 2.
*Latin 1.
*Plane Geometry.
Agriculture.
Home Economics.
Manual Training.
European History, Part 1.
Botany.

JUNIOR YEAR.

*English 3.
*Latin 2.
*Physics.
Agriculture.
Home Economics.
European History, Part 2.
Bookkeeping.
Solid Geometry.

*English 3.
*Latin 2.
*Physics.
Agriculture.
Home Economics.
European History, Part 2.
Bookkeeping.
Solid Geometry.

SENIOR YEAR.

*English 4.
*American History.
*Algebra, Advanced.
Latin 3.
Chemistry.
Agriculture.
Home Economics.
Civics.

*English 4.
*American History.
Commercial Arithematic.
Latin 3.
Chemistry.
Agriculture.
Home Economics.
Economics.

*Required course.

ATHLETICS.

The school has excellent facilities for athletics. A large gymnasium is located in the basement with large bleachers to accommodate more than 400 spectators. Shower baths and dressing rooms are located at each end of the building for both the boys and girls. The basket ball cage is a regulation size floor 35x60.

Football is played in the fall of the year and baseball in the spring. On the ten-acre campus a splendid gridiron and baseball diamond have been laid off. Tennis courts and a track are to be made in the near future. During the winter months four basketball teams are organized, two boys' and two girls.'

The Athletic Association to which all students belong is a very thriving organization with about \$200 in the treasury, this amount having been received from the games and entertainments.

All pupils are required to take physical training or participate in some branch of athletics, as it is the aim of the school to develop the child physically as well as mentally.

SCHOOL AND SOCIAL ACTIVITIES.

All the high school pupils belong to one of the two Literary societies; a program is given by one of the societies every two weeks. At the end of the year an inter-society contest is held. Each grade must give a program on some Friday at least four times during the school year.

At various times during the year home talent plays and other entertainments are given.

During the early part of the school year the patrons give their annual reception to the teacher, thus giving the new teachers an opportunity to become acquainted with the parents.



Where conveyances are kept.

Near the end of the basketball season a local tournament is staged in which all the surrounding high schools participate. And at the close of the basketball season a banquet is given to the players. For all such occasions the Home Economics rooms are a very delightful asset.

PLANS FOR FUTURE DEVELOPMENT.

The school now has seven teachers, but more are to be added in another year.

Plans are under consideration for a Teachers' Home, and in all probability it will be erected within another year.

A Community and High School music and lecture course is being organized which will add much to the literary standard of the community.



The John Swaney Consolidated School.

This school was organized to meet the needs of a rural community. The smallness of the district limited the funds necessary. A community high school district has been voted by the people. This will give ample funds. The building will be enlarged and better equipment and more teachers will be provided. A teachers' cottage is provided by the district.



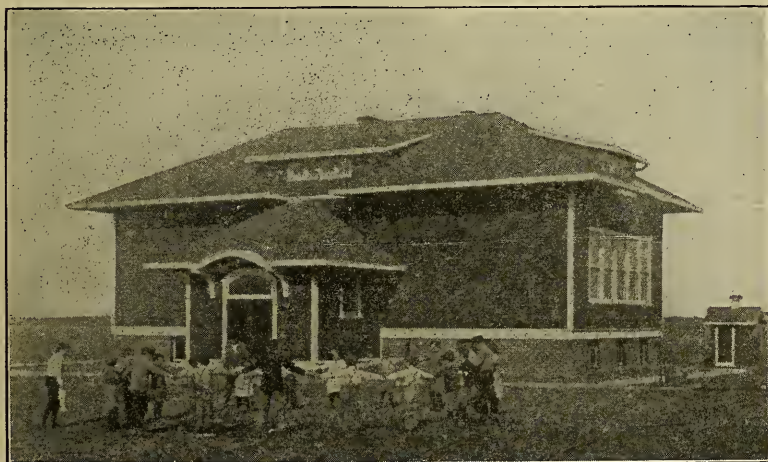
Harlem Consolidated School, near Rockford, Winnebago County.

The district having increased in population and wealth, this building has been enlarged and another built to accommodate the primary grades in the populous part of the district.



Rollo Consolidated Schools.

A community high school district has been super-imposed upon this district providing ample revenue to conduct a most efficient school, for country children. The community church and the teachers' cottage, in addition to the school house and large ground floor gymnasium, make this a real community center.

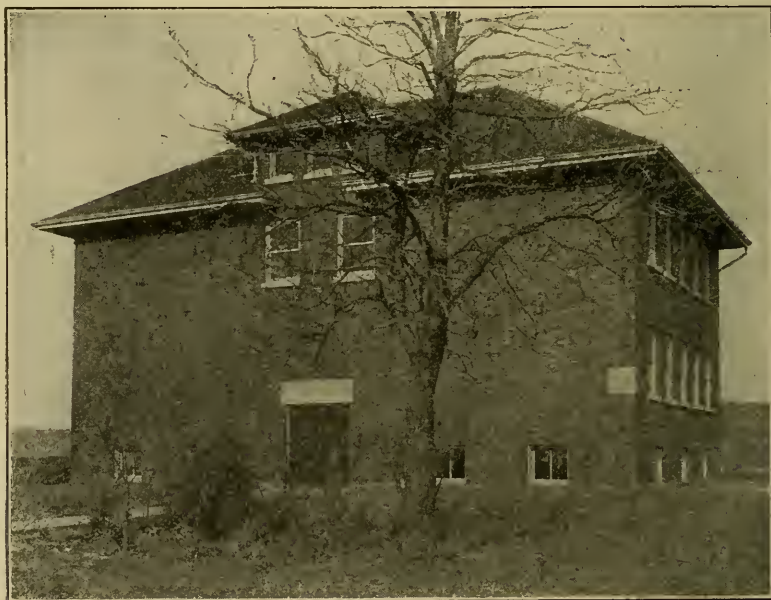


The Ben F. Funk Consolidated School, McLean County.



Kishwaukee Consolidated School Building.

These are rather small districts, but the provisions of the non-high school district law enables them to have good three-year high school courses and the tuition for the fourth year is paid by the non-high school district board.



New Milford Consolidated School.

SECTION V. HIGH SCHOOL PRIVILEGES.

The most pressing need of the country child is a chance to get schooling beyond the elementary course. If he attends regularly and is fairly well taught, he completes the elementary school at fourteen years of age. Before rural school work was systematized the country child attended school much longer and to his great profit. Between fourteen and eighteen years of age he pursued the common school branches more thoroughly than the child of thirteen can do it. But this is not feasible now. The high school alone can meet his needs in these modern times. To send him to a high school where he has to live away from home is a risk which parents are loath to take. A four year high school near enough so that he can be at home every night is necessary if the country child is to have a fair show for success. Even if he has access to a good two or three year high school only, it is a great advantage, for when he has completed this he is old enough to be sent away from home.

This need is being met in some states by the consolidation of the country school providing a high school course.

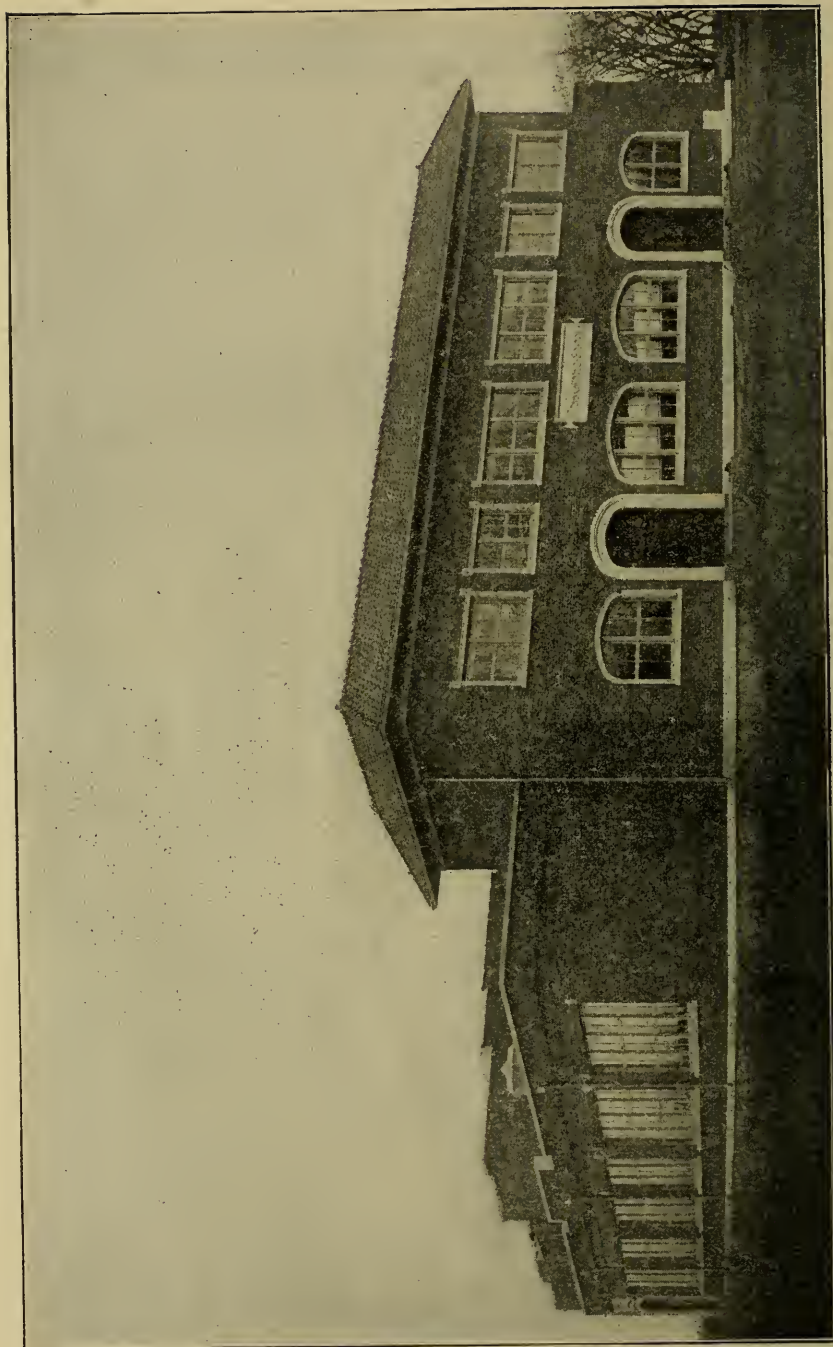
It is being done in this way to some extent in Illinois, but the difficulty of conveying the small children over the prevailing roads deters many people. When the hard roads which are planned are completed, consolidation will progress much more rapidly. At present high school privileges are provided for the older children while the elementary school work is being done in the one-room schools within walking distance of home.

HIGH SCHOOL TUITION.

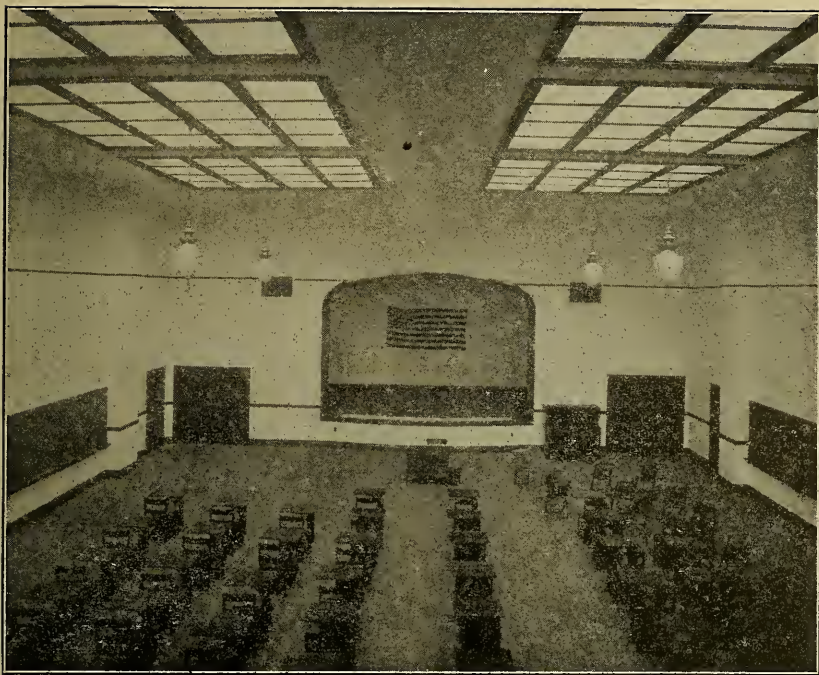
In every county a board of three members of which the county superintendent is secretary is elected to levy a tax on all the territory of the county not in a district maintaining a four year high school and the tuition of all eighth grade graduates residing in this territory is paid in any recognized high school which the pupil may select. Since the two and three year high schools are supported by this high school fund, conditions are very favorable for their establishment. As these schools are supervised by the State Department of Public Instruction the work is such that the pupils receive full credit when they enter a four year school to complete the course. It is estimated that 75 per cent of the country children are within less than six miles of a high school. Many of the village high schools which before were not worthy of the name, under the influence of the high school tuition law and State supervision, are meeting the requirements and are affording good facilities for two and three years. Others are being started in centers furnishing enough pupils.

COMMUNITY HIGH SCHOOLS.

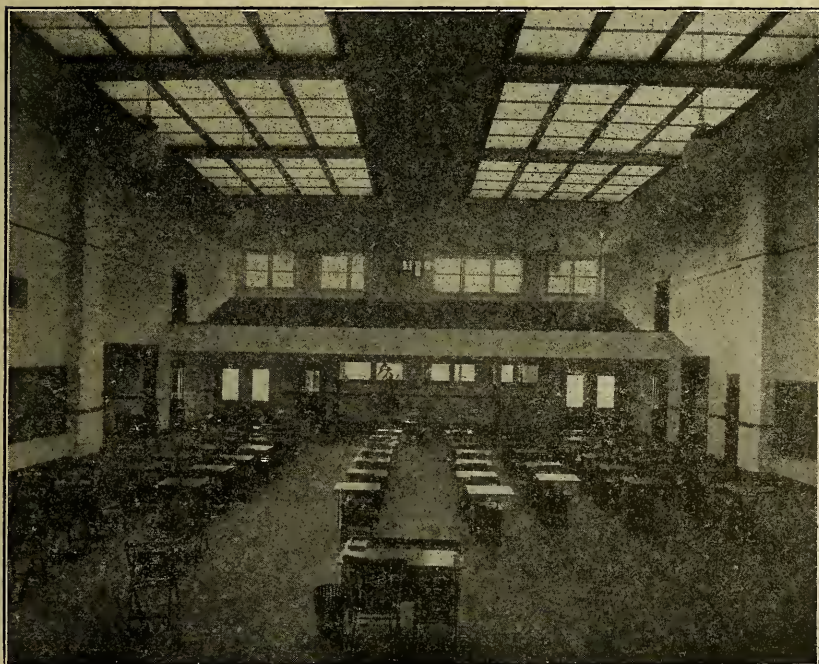
For many years Illinois has been establishing township high schools. In forty-four years seventy-three of these were established. Being under a board which is not concerned with the elementary schools but deeply interested in the high school, these have been of a high order. Conditions, too, are favorable for continuous progress. The community center of a township is central in only a few townships in the State. Hence, the township plan did not meet the needs of most of the communities.



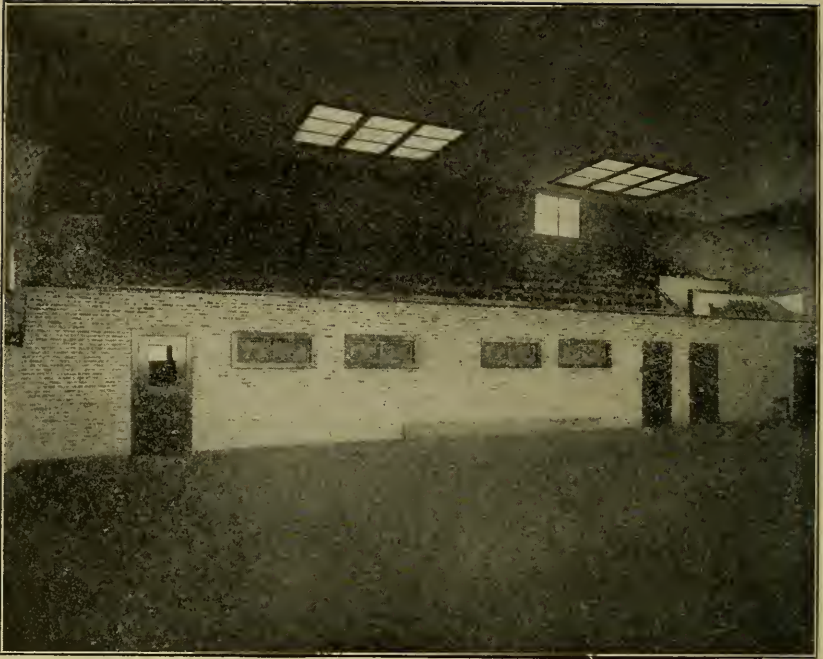
Athens Community High School.



Front View, Auditorium, Athens Community High School.



Rear View, Athens Community High School Auditorium.



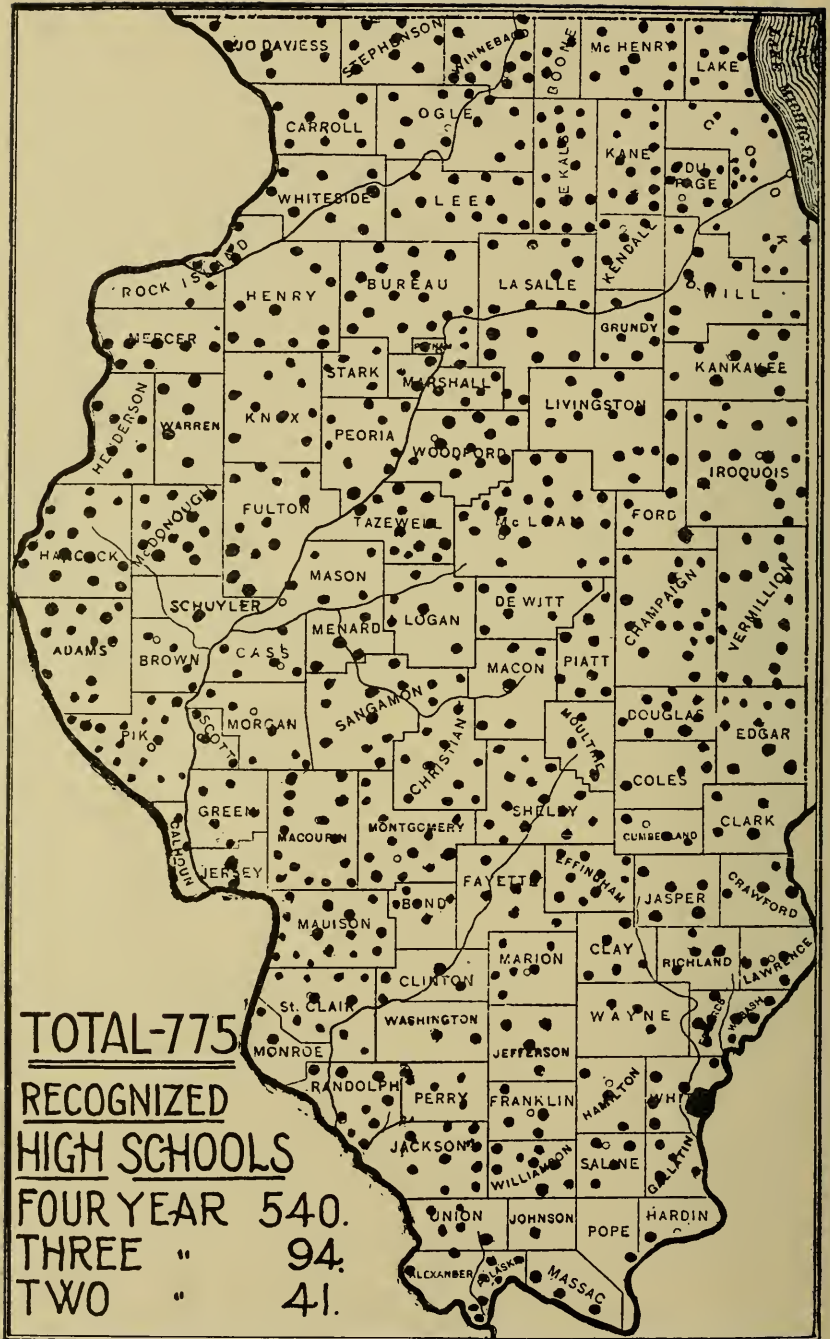
Gymnasium, Athens Community High School.

For eight years a community high school law has been in operation and during that time in spite of adverse court decisions which impeded their establishing, two hundred and thirty-eight have been established. At the present time they are being organized at the rate of one a day. These are four year high schools and most of them are located in small towns, villages and some in the open country. As a rule, they are responsive to modern ideas and maintain courses in agriculture, shop work, domestic economy and business courses. The house generally serves as the community center and the school influences the life of the community.

It is probable that when the problem of transportation of the children to and from school can be solved, that the community high school districts will arrange to convey all the children to the central schools. The housing problem can be easily solved by the addition of rooms to the present building.

HIGH SCHOOL STATISTICS.

Number of four year schools.....	540
Number of three year schools.....	94
Number of two year schools.....	141
<hr/>	
Total recognized high schools.....	775
Enrollment in first year of school.....	176,144
Enrollment in eighth year of school.....	87,716
Enrollment in first year of high school.....	46,457
Enrollment in second year of high school.....	31,444
Enrollment in third year of high school.....	18,703
Enrollment in fourth year of high school.....	15,953
<hr/>	
Total high school enrollment.....	112,557



AVAILABLE PUBLICATIONS.

The following publications may be obtained free from the Superintendent of Public Instruction so long as the supply holds out.

FOR ELEMENTARY SCHOOLS.

1. Arbor and Bird Day booklets containing matter suitable for nature study. Circulars Nos. 4, 25, 32, 47, 62, 68, 77, 83, 97, 113, 128, 134.
2. Memorial Day booklets containing matter suitable for patriotic instruction. Circulars Nos. 7, 26, 33, 49, 56, 63, 69, 78, 84, 102, 119, 131.
3. Mothers' clubs. Circulars Nos. 18, 43.
Programs and Suggestions for School and community meetings, Circular 111.
4. Corn Day Annuals. Circulars Nos. 34, 38, 73, 80.

FOR HIGH SCHOOLS.

5. Circulars pertaining to the recognition of high schools. Circulars Nos. 108, Recognized Higher Institutions of Learning; No. 112, Laboratory Equipment for Recognized High Schools; No. 120, Working Libraries; No. 135, Recognized High Schools; No. 142, Announcements and courses of study.

BULLETINS ISSUED BY THE BOARD FOR VOCATIONAL EDUCATION.

- Bulletin No. 1.—Statement of plans and policies.
 - Bulletin No. 2.—Information desired in application for approval of plans for vocational instruction in trades and industries.
 - Bulletin No. 3.—Information desired in application for approval of plans for instruction in vocational agriculture.
 - Bulletin No. 4.—Information desired in application for approval of plans for instruction in vocational home economics.
 - Bulletin No. 5.—Information desired in application for approval of plans for teacher training in trades and industries.
 - Bulletin No. 6.—Information desired in application for approval of plans for teacher training in vocational agriculture.
 - Bulletin No. 7.—Information desired in application for approval of plans for teacher training in vocational home economics.
 - Bulletin No. 8.—Six months directed or supervised practice in agriculture.
- Report of Executive Officer, February 1, 1918, to December 1, 1918.
- Bulletin No. 9.—Plans for the year 1918-19.
 - Bulletin No. 10.—Manual and note book for supervised practice in agriculture.
 - Bulletin No. 11.—Courses of study in vocational agriculture.

Bulletin No. 12.—Types of courses in industrial education.

Bulletin No. 13.—Part-time or day continuation schools.

Bulletin No. 14.—Trade extension courses in evening schools.

Bulletin No. 15.—Illustrative material for teaching agriculture in the high school.

Bulletin No. 16.—A Bibliography of Agricultural Books for the High School Library.

OTHER PUBLICATIONS.

Circular No. 129.—Suggestions for Courses in Agriculture.

Circular No. 140.—The Certification of Teachers, containing the law and complete information.

Circular No. 141.—School Directory, containing addresses of Superintendents, principals of elementary schools, principals and teachers of recognized high schools, Faculties of State Institutions of Learning.

Catalogue Illinois Pupils' Reading Circle, containing lists of suitable library books.

Circular No. 144.—Standard Elementary Schools, containing information concerning the Sanitation Law, Standard Schools, School Houses, Consolidated Schools, High School privileges.



School Life in the Country.

LIBRARY OF CONGRESS



0 020 948 891 7